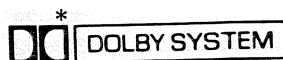


Service Manual

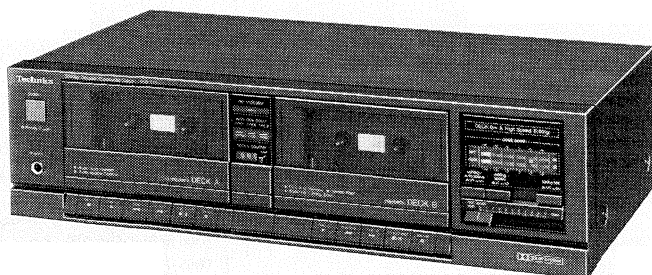
Dolby NR-Equipped
Double Cassette Deck

Cassette Deck
RS-T11



Color

(K)...Black Type
(S)...Silver Type



Color	Areas
(K) (S)	[E].....Continental Europe.
(K) (S)	[EK].....United Kingdom.
(K) (S)	[EH].....Holland.
(K) (S)	[EG].....F.R. Germany.
(K) (S)	[XA].....Asia, Latin America, Middle Near East, Africa and Oceania.
(K) (S)	[XL].....Australia.
(K)	[XB].....Saudi Arabia.

SPECIFICATIONS

■ CASSETTE DECK SECTION

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Heads	
(DECK A) REC/PLAY	Solid Permaloy head
Erasing	Double-gap ferrite head
(DECK B) PLAY	Solid Permaloy head
Motors	
(DECK A) Capstan/reel table drive	
2 speed electronically controlled DC motor	
(DECK B) Capstan/reel table drive	
2 speed electronically controlled DC motor	
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Tape speed	4.8 cm/sec. (1-7/8 ips)
Frequency response (w/o Dolby N.R.)	
METAL	20 Hz~16 kHz (±15 dB) 30 Hz~15 kHz (DIN)
CrO ₂	20 Hz~15 kHz (±15 dB) 30 Hz~15 kHz (DIN)
NORMAL	20 Hz~15 kHz (±15 dB) 30 Hz~15 kHz (DIN)
S/N (signal level = max recording level, CrO ₂ type tape)	
Dolby B NR on	66 dB (CCIR)
NR off	56 dB (A weighted)

Wow and flutter 0.08% (WRMS)

Fast Forward and Rewind Time

Approx. 105 seconds with C-60 cassette tape

Input sensitivity and impedance

LINE 60 mV/47 kΩ

Output voltage and impedance

LINE 400 mV/3.2 kΩ

HEADPHONES 80 mV/8 Ω

■ GENERAL

Power consumption 18W

Power supply

For Australia AC 50 Hz/60 Hz, 240V

For continental Europe AC 50 Hz/60 Hz, 220V

For others AC 50 Hz/60 Hz, 110V/127V/220V/240V

Dimensions (W×H×D) 430 × 120 × 228 mm

Weight (16-15/16" × 4-23/32" × 8-31/32")

3.8 kg (8.4 lb.)

Note:

Specifications are subject to change without notice.

Weight and dimensions are approximate.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

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■ LOCATION OF CONTROLS

• Headphones jack (phones)

• Power “standby , on” switch (power “standby , on”)

This switch turns on and off the secondary circuit power only. The unit is in the “stand-by” condition when this switch is set to the “standby  ” position. Regardless of the switch setting, the primary circuit is always “live” as long as the power cord is connected to an electrical outlet.

Tape-select indicators (Auto Tape Select)

The tape selector setting changes automatically, and the indicator indicates the type of tape being used in “DECK A”.

“DECK A” counter/reset button (DECK A counter/reset)

This indicates the amount of tape travel of “DECK A”. When this button is pressed, the readout will be reset to “000”.

Editing tape-speed selector (editing speed)

Press to select the tape speed for edit-recording.

Editing/auto space switch (editing/auto space)

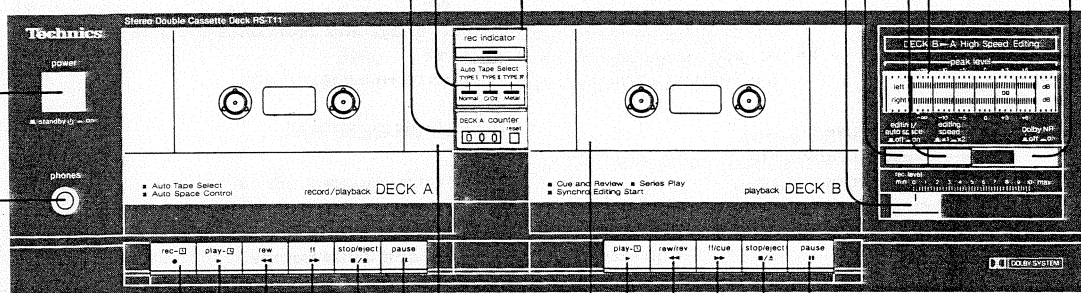
Recording level control (rec level)

Recording indicator (rec indicator)

Level meters (peak level)

During recording, these meters indicate the recording level. The level is adjusted by using the recording level control. During playback, they indicate the level of the recorded sound.

Dolby noise-reduction switch (Dolby NR)



When using “DECK A”

Record button (rec- /)

Playback button (play- /)

Rewind button (rew/)

Fast-forward button (ff/)

Stop/eject button (stop/eject/ /)

Pause button (pause/)

Cassette holder

When using “DECK B”

Pause button (pause/)

Stop/eject button (stop/eject/ /)

Press this button to stop the tape during recording or playback, and to open the cassette holder.

Fast-forward/cue button (ff/cue/)

Rewind/review button (rew/rev/)

Playback button (play- /)





Cassette holder

■ OPERATION Playback

Notes:

- “DECK A” and “DECK B” cannot both be used for playback at the same time.
- Do not press the stop/eject button while the tape is moving, doing so might cause a malfunction or damage the tape.

1 "on" ($\blacksquare \rightarrow \blacksquare$)

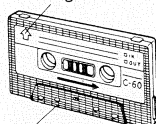
2 “off” ( → ): For playing back tapes which were not recorded through a Dolby noise-reduction system.
“on” ( → ): For playing back tapes which were recorded through a Dolby noise-reduction system.
 (See below.)

When using "DECK A"

3 Press, then insert the tape cassette.

4 Press.
(Playback will begin.)

The side to be played back
facing outward.

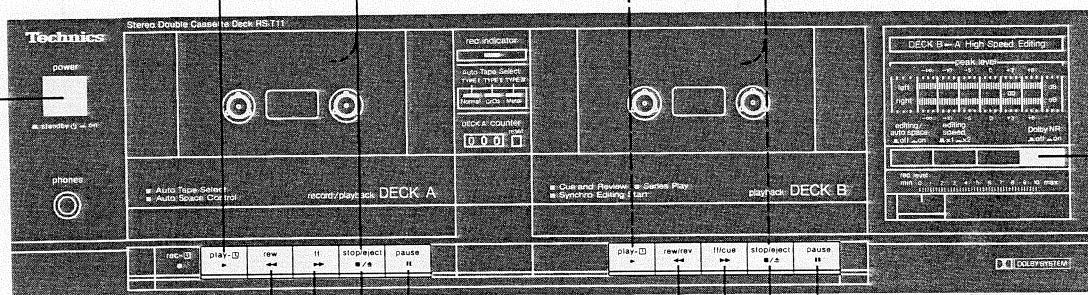


Part where tape is exposed
facing downward.

When using "DECK B"

3 Press, then insert the tape cassette.

4 Press.
(Playback will begin.)



Press to rewind the tape. ●

Press to advance the tape. ●

Press to stop the tape.

Press to stop the tape temporarily. •

- Press to stop the tape temporarily.

- Press to stop the tape.

- When in the stop mode, press this button to advance the tape rapidly. When in the play mode, press this button to fast forward the tape while monitoring the sound.

- When in the stop mode, press this button to rewind the tape rapidly. When in the play mode, press this button to rewind the tape while monitoring the sound.

Dolby noise-reduction system

The Dolby noise reduction system boosts low level high frequency signals during recording. During playback, these high frequency signals are reduced by a corresponding amount and, therefore, noise is reduced.

This unit uses the Dolby-B type noise-reduction system.

Dolby noise-reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
 "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Automatic tape selector system

This cassette deck automatically detects the type of tape being used, and adjusts for the proper bias and equalization. The tape-select indicator indicates the type of tape being used in "DECK A".

"Metal" lights when no tape has been loaded in the cassette holder of "DECK A".

Series playback

Continuous playback from one side of a tape in "DECK A" to one side of a tape in "DECK B" (or from "DECK B" to "DECK A") is possible.

- When starting from “DECK A”

First press the playback button on "DECK A", and then press the playback button on "DECK B".

- When starting from “DECK B”


First press the playback button on "DECK B", and then press the playback button on "DECK A".

Recording

Your attention is drawn to the fact that recording pre-recorded tapes or other published or broadcast material may infringe copyright laws.

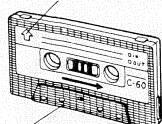
Note:

Only "DECK A" can be used for recording. "DECK B" has no record capability.

1 "on" ()



2 Press, then insert the tape to be used for recording.

The side to be recorded facing outward.




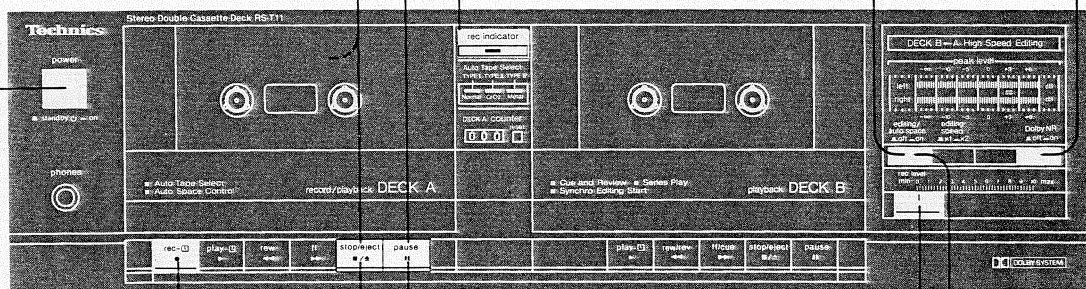
Part where tape is exposed facing downward.

3 Press.

4 "off" ():
"on" ():

Tape recording without the Dolby noise-reduction system.
Tape recording with the Dolby noise-reduction system.

5 "off" ()



6 Press.
The recording indicator will be illuminated. (Recording stand-by mode)

8 Adjust the recording level.
(See below.)

7 Begin the program source to be recorded.

Press to stop the recording.

9 Press.
(Recording will begin.)

Press to temporarily stop the recording.

Press to make non-recorded spaces between tunes.
(See below.)

To make non-recorded spaces between tunes

With this unit, by following the steps below, it is possible to make non-recorded spaces (four seconds long) between tunes.

- **During recording, press the editing/auto space switch.**
After about 4 seconds, "DECK A" will automatically change to the recording stand-by mode.
- **To start the recording again, set the switch to the "off" position.** (Recording will begin.)

To erase recorded sounds

1. Insert the recorded tape cassette into the cassette holder of "DECK A".
2. Set the Dolby noise-reduction switch to the "off" position.
3. Set the recording level control to the minimum ("0") position.
4. Press the record button, and then let the tape run.

Note that any sounds on the tape will be automatically erased if a new recording is made on that part of the tape.

Note:

Sounds from the deck cannot be heard while the editing/auto space switch is pressed in, so set the tape-monitor switch (on the receiver, etc.) to the "source" position to be able to monitor the sound.

Adjustment of the recording level

The numbers which you should use as a guide for the adjustment of the tape level will differ depending upon the type of tape used.

Tape type	Normal (TYPE I) CrO ₂ (TYPE II)	Metal (TYPE IV)
Level (Dolby NR off)	0 dB	+3 dB
Level (Dolby NR on)	+3 dB	+6 dB

Edit-Recording

"Edit-recording" is recording from one tape to another while making some changes.

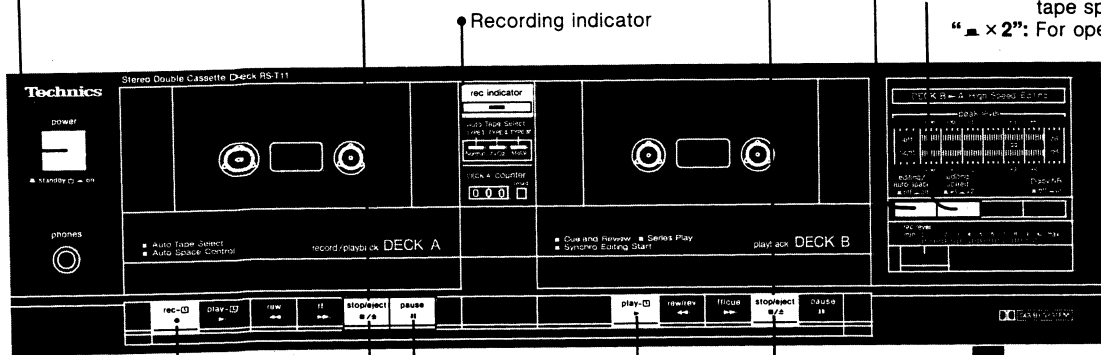
1 "on" (I → II)

2 Press, then insert the tape to be used for recording.

3 Press, then insert the tape to be used for playback.

4 "on" (I → II)

5 Select the tape speed.
"I x 1": For operation at the normal tape speed
"I x 2": For operation at double speed



6 Press. The recording indicator will be illuminated. (Recording stand-by mode)

Press to stop the edit-recording temporarily.

7 Press. ("DECK B" playback and "DECK A" recording will then begin.)

Press to stop the edit-recording temporarily. After about 4 seconds, "DECK A" will automatically change to the recording stand-by mode. (This will make a non-recorded space between tunes.) To start edit-recording again, press the playback button on "DECK B".

To find the tune you want to record:
1 Press the pause button of "DECK A". 3 Release the pause button of "DECK A".
2 On "DECK B", find the tune you want to record. 4 Press the play button of "DECK B".

Timer Recording/Playback

If an audio timer (option) is connected to this unit, recording of a radio broadcast, or tape playback, will automatically begin at the preset time. Connect the AC power cord of this unit to the power source outlet of the timer. (See the operating instructions of the timer for detailed information.)

Note: When setting the timer for timer-controlled recording or playback, the timer should be set to a time which will extend beyond the time of one side of the tape. This is because, if the timer switches OFF before the tape reaches its end, the capstan and pinch roller remain pressed together, which might adversely affect their performance.

Timer recording

- 1. Prepare for recording (Follow steps 1 through 8 of "Recording" on page 5. After adjusting the recording level, press the stop/eject button and the pause button.)
- 2. Set the timer to the desired recording-start time. (Power will be off.)
- 3. Press the record button. (At the set time, the power will come on and the broadcast will be recorded.)

After setting the timer Make sure that the power switch is set to the "on" position.

Timer playback

- 1. Rewind the tape to the position from which you want playback to begin.
- 2. Set the timer to the desired playback-start time. (Power will be off.)
- 3. Press the playback button of whichever deck you want to use, "DECK A" or "DECK B". (At the set time, power will come on and the playback will begin.)

Note: For timer playback, playback always starts from "DECK A" in the series playback mode.

After setting the timer Make sure that the power switch is set to the "on" position.

DISASSEMBLY INSTRUCTIONS

Ref. No. 1	How to remove the cabinet	Ref. No. 4	How to remove the LED meter P.C.B. and VR/SW P.C.B.
Procedure 1	Remove the 4 screws.	Procedure 1 → 4	1. Remove the 2 screws (1, 2). 2. Push the one tab aside, and then remove the VR/SW P.C.B. 3. Remove the one screw (3). 4. Push the 3 tabs aside, and then remove the LED meter P.C.B.
Ref. No. 2	How to remove the main P.C.B.		
Procedure 1 → 2	1. Remove the 2 screws (1, 2). 2. Open the side of back chassis, and then pull down it. 3. Remove the one screw (3). 4. Remove the 4 tabs aside.		
	Fig. 1		Fig. 3
Ref. No. 3	How to remove the mechanism unit	Ref. No. 5	How to remove the LED P.C.B.
Procedure 1 → 3	1. Remove the 6 screws (1~6). 2. Push the eject button. 3. Remove the counter belt (for mechanism unit of DECK A).	Procedure 1 → 5	1. Remove the 2 screws (7, 8). (fig. 2) 2. Remove the 3 tabs aside. (fig. 2)
	Fig. 2		
		Ref. No. 6	How to remove the front panel
		Procedure 1 → 3 → 4 → 5 → 6	1. Remove the 5 screws (1~5). 2. Open the sides of front panel, and then pull it to yourself.
			Fig. 4

MEASUREMENT AND ADJUSTMENT METHODS

Measurement Condition

- Input level controls; Maximum
- Editing switch; Off
- NR switch; Off
- Editing tape speed switch; X1

Measuring instrument

- EVM(Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator

Test tape

- Head azimuth adjustment (8kHz, -20dB); QZZCFM
- Tape speed adjustment (3kHz, -10dB); QZZCWAT
- Playback frequency response (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250kHz, 125kHz, 63kHz, -20dB); QZZCFM

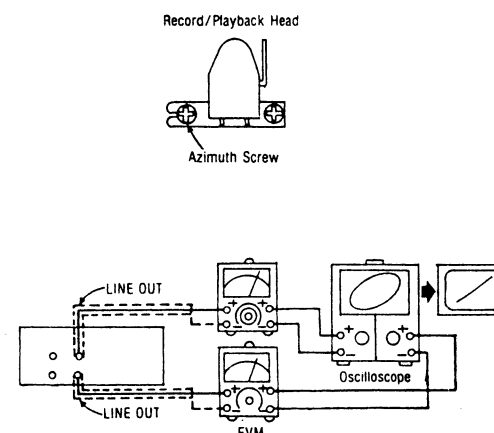
- Make sure heads are clean
- Make sure capstan and pressure roller are clean
- Judgeable room temperature $20\pm5^{\circ}\text{C}(68\pm9^{\circ}\text{F})$

- ATT(Attenuator)
- DC voltmeter
- Resistor (600Ω)

- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment
Normal reference blank tape; QZZCRA
CrO₂ reference blank tape; QZZCRX
Metal reference blank tape; QZZCRZ

HEAD AZIMUTH ADJUSTMENT

1. Playback the azimuth adjusted part(8kHz, -20dB) of the test tape(QZZCFM) and regulate the angle adjusting screw so that the outputs of L-CH and R-CH are maximized.
(When the adjusting positions are different with L-CH and R-CH, find a position where the outputs of L-CH and R-CH are balanced, and then make the adjustment.)
2. At the same time, obtain a lissajous waveform and eliminate phase deflection.
3. After adjustment, lock the tape guide height and angle adjustment screws.



TAPE SPEED ADJUSTMENT

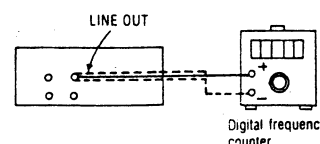
High speed

1. Set the editing tape speed switch to "X2" and connect the Deck A = TP1 and TPN1, Deck B = TP2 and TPN2.
2. Playback the middle part of the test tape (QZZCWAT).
3. Adjust Deck A = VR803 so that the output is within the standard.

Normal speed

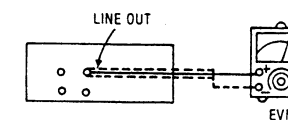
4. Set the editing tape speed switch to "X1" and open the Deck A = TP1 and TPN1, Deck B = TP2 and TPN2.
5. Playback the middle part of the test tape (QZZCWAT).
6. Adjust Deck A = VR801 and Deck B = VR802 so that the output is within the standard.

Standard value: 3000±15Hz(Normal), 6000±630Hz(High)



PLAYBACK FREQUENCY RESPONSE

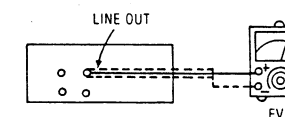
1. Playback the playback frequency response part (315Hz, 12.5kHz~ 63Hz, -20dB) of the test tape (QZZCFM).
2. Check that the frequency is within the range shown in Fig.1 for both L-CH and R-CH.
(See page 9.)



PLAYBACK GAIN ADJUSTMENT

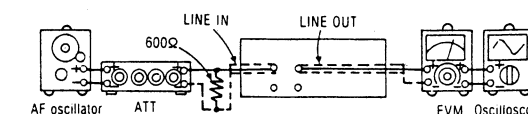
1. Playback the playback gain adjusted part (315Hz, 0dB) of the test tape (QZZCFM).
2. Adjust Deck B = VR1(L-CH) (VR2(R-CH)) and Deck A = VR3(L-CH) (VR4(R-CH)) so that the output is within the standard.

Standard value: 0.4±0.02V



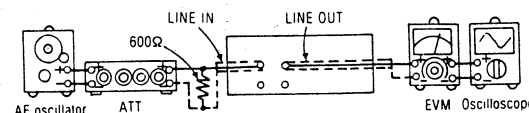
OVERALL FREQUENCY RESPONSE

1. Set a normal blank tape (QZZCRA) and record by applying signal (50Hz ~ 12.5kHz), 20dB attenuated from the reference input level signal (1kHz, -24dB).
2. Playback the signal recorded in step 1, and check that the level of each output frequency is within the range shown in Fig.2 in comparison with the reference frequency (1kHz).
3. If it is not within the standard range, adjust the bias current by Deck A = VR301(L-CH) (Deck A = VR302(R-CH)) so that the frequency level is within the standard.
 - Level up in high frequency range.....Increase the bias current.
 - Level down in high frequency range...Decrease the bias current.
4. After that, increase the signal recorded on CrO₂ blank tape(QZZCRX) and metal blank tape(QZZCRZ) up to 14kHz and adjust in the same way as mentioned above and check that the frequency level is within the range shown in Fig.3.



OVERALL GAIN ADJUSTMENT

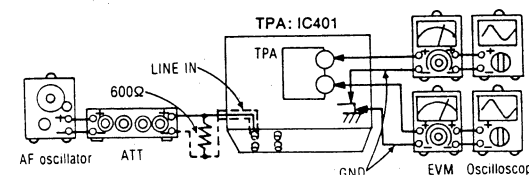
1. Set a normal blank tape (QZZCRA) and apply the reference input level signal (1kHz, -24dB) in record pause mode.
2. Adjust the output 0.4V by attenuator and then record.
3. Playback the signal recorded in step 2, and check that the output is within the standard.
4. If it is not within the standard, adjust Deck A = VR5(L-CH) ((Deck A = VR6(R-CH))) and repeat the step (1), (2) and (3) until the output is within the standard.



Standard value: 0.4V \pm 0.5dB(0.02V)

DOLBY NR CIRCUIT

1. Set a normal tape and apply 5kHz signal in record pause mode.
2. Adjust by attenuator so that the output between terminal 6(L-CH) ((terminal 19(R-CH)) of IC401 and ground is 12.3mV.
3. Turn NR switch ON, and check that the level changes as specified from the level in NR out mode.



Standard value: 8 \pm 1.5dB

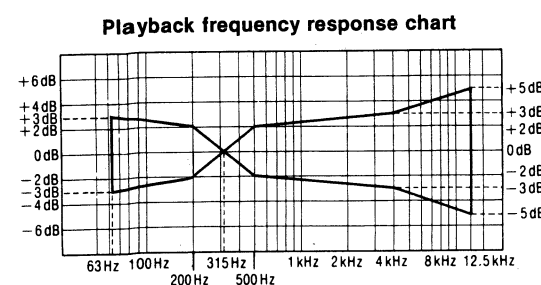


Fig. 1

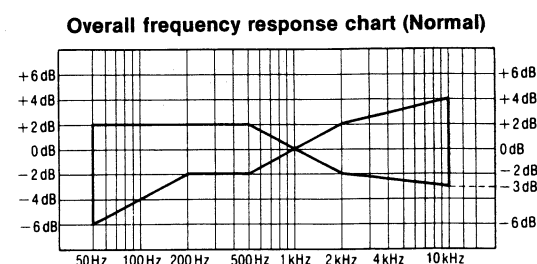


Fig. 2

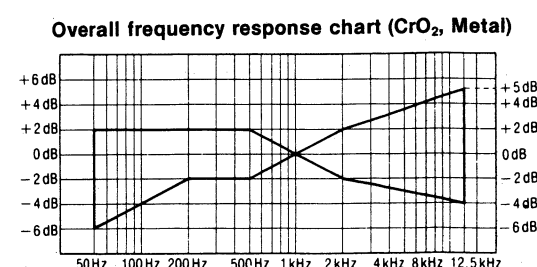
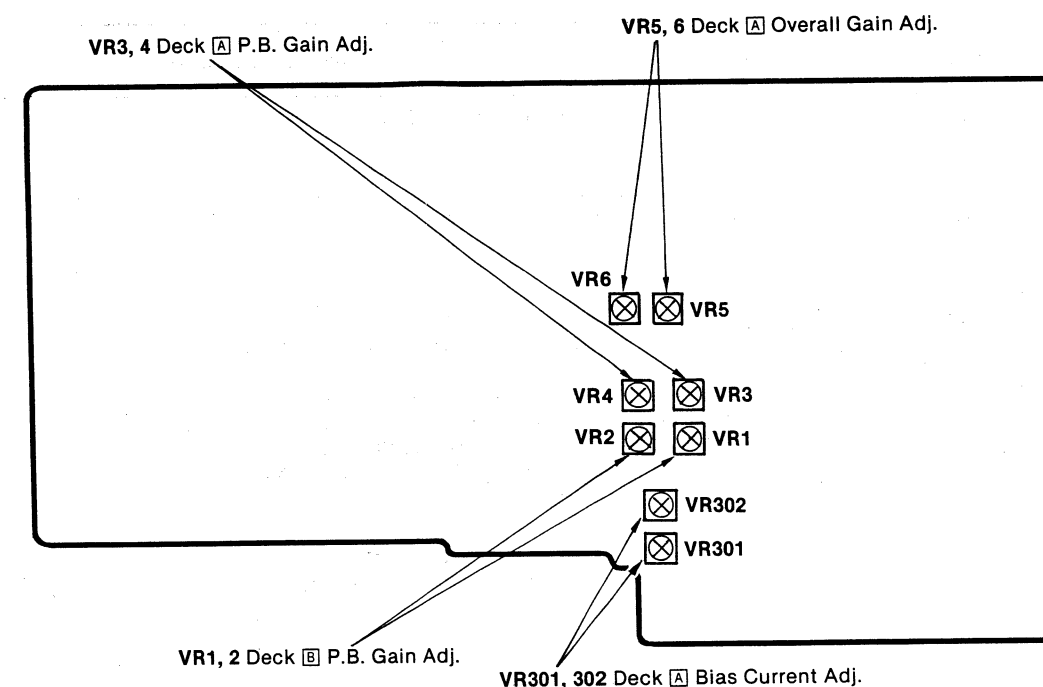


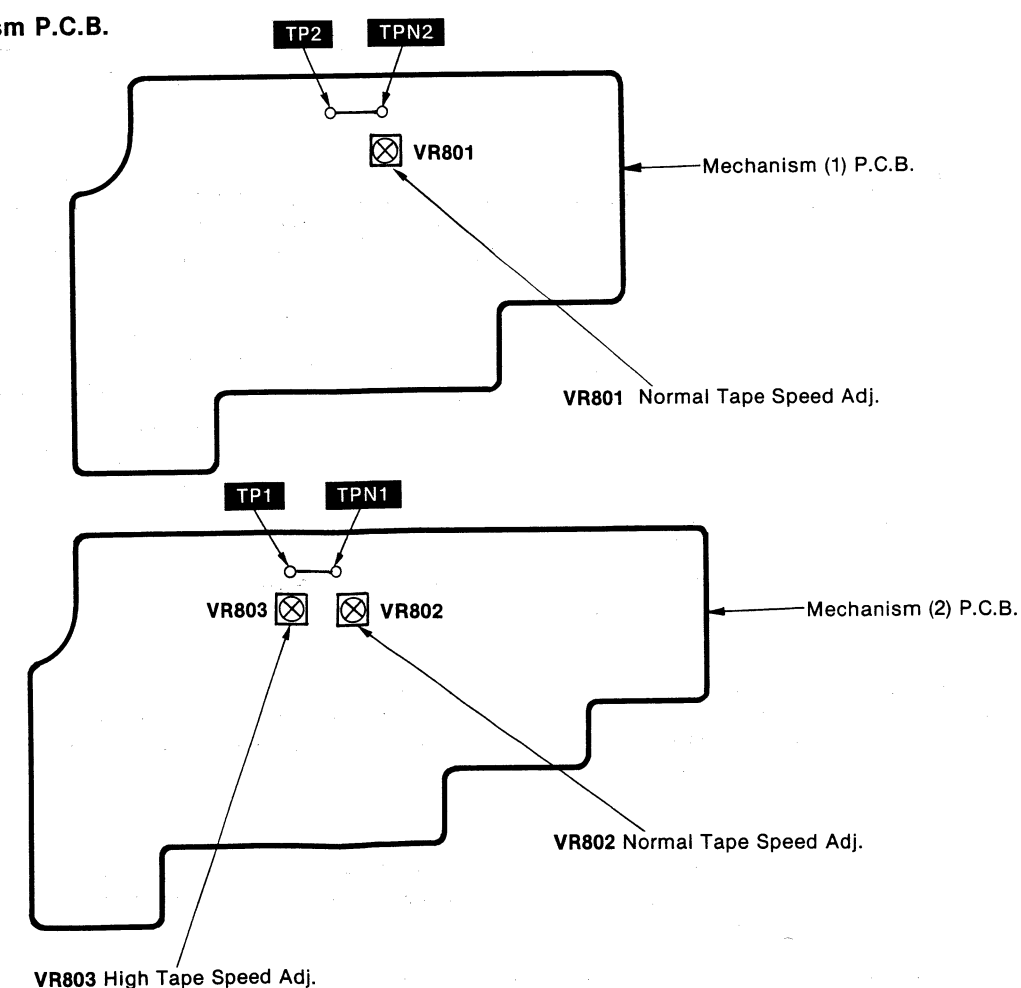
Fig. 3

Adjustment Points

Main P.C.B.




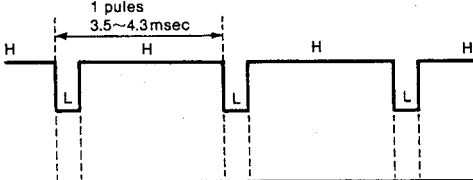

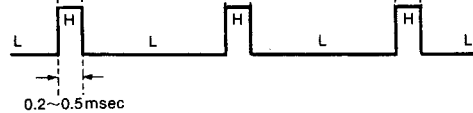
Mechanism P.C.B.



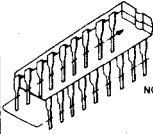
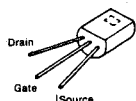
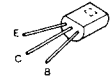
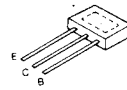
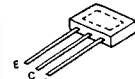
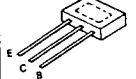
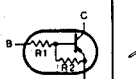
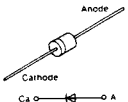

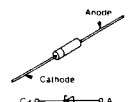

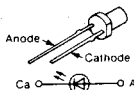

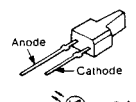

■ MICROCOMPUTER TERMINAL FUNCTION AND WAVEFORM
(IC801: MN14-02STO)

Terminal No.	Symbol	Name	Function/operation
1	Vss	—	• Connection to GND.
2	CO9	—	• Non connection.
3	CO8	REC Prescript signal output	<ul style="list-style-type: none"> • "H" when LINE IN is REC mode. • "L" when LINE IN is other mode.
4	CO7	Remote control signal cancellation output	<p>(a) LINE IN REC mode (Deck A). PLAY mode (Deck A, Deck B). } ... "H" (b) EDITING mode (Deck A, Deck B). Except (a) mode.</p> <p>Remote control signal (SNS0 Terminal output signal input signal)</p> <p>CO7 Terminal output signal</p>
5	CO6	Direct muting (DMT) signal output	<ul style="list-style-type: none"> • "L" in mute on (STOP, FF/REW, CUE/REV and each selector), "H" in mute off (REC, PLAY). • DMT Output timing of each selector.
6	CO5	Muting off signal output of playback AMP	• Deck B "L" in CUE/REV, "H" in other.
7	AI3	Reading of input switch state deck B auto tape selector (S904)	<ul style="list-style-type: none"> • "L" when auto tape selector is on mode. • "H" when auto tape selector is off mode.
8	AI2	Reading of input switch state deck B FF/REW (S902)	<ul style="list-style-type: none"> • "L" when FF/REW switch is on mode. • "H" when FF/REW switch is off mode.

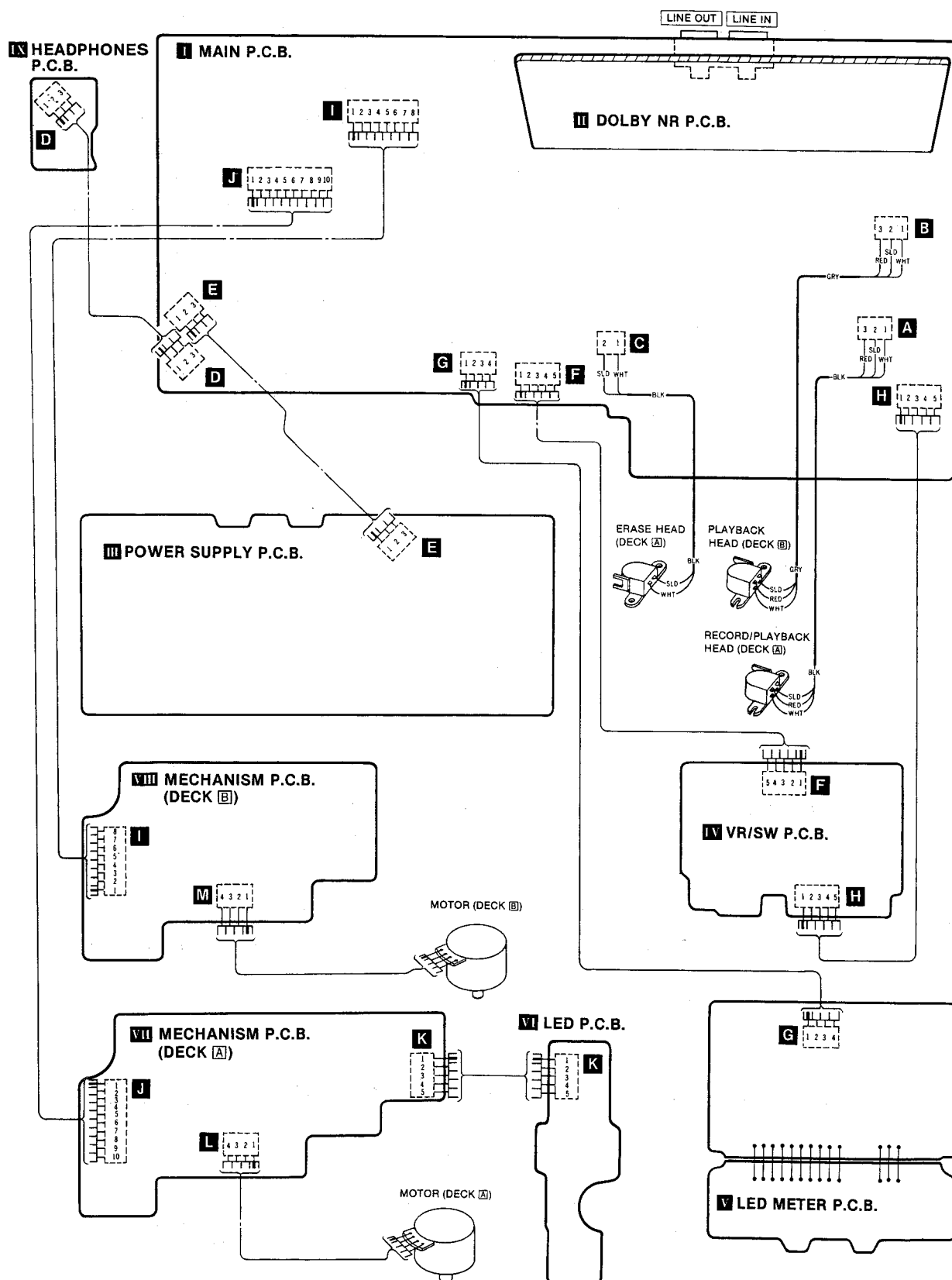
Terminal No.	Symbol	Name	Function/operation
9	AI1	Reading of input switch state deck A, deck B motors (S906, S903)	<ul style="list-style-type: none"> • DO0 output (Scan A) signal → "L" Deck A... • "L" in motor switch on, "H" in motor switch off. • DO1 output (Scan B) signal → "L" Deck B... • "L" in motor switch on, "H" in motor switch off.
10	AI0	Reading of input switch state deck A, deck B PLAY (S905, S901)	<ul style="list-style-type: none"> • DO0 output (Scan A) signal → "L" Deck A... • "L" in PLAY switch on, "H" in PLAY switch off. • DO1 output (Scan B) signal → "L" Deck B... • "L" in PLAY switch on, "H" in PLAY switch off.
11	BI3	Reading of input switch state editing (S1)	<ul style="list-style-type: none"> • "L" when editing switch is on mode. • "H" when editing switch is off mode.
12	BI2	Reading of input switch state Tape speed selector (S2)	<ul style="list-style-type: none"> • "L" when tape speed selector is on mode. • "H" when tape speed selector is off mode.
13	BI1	Reading of input switch state deck A auto tape selector (S908)	<ul style="list-style-type: none"> • "L" when auto tape selector is on mode. • "H" when auto tape selector is off mode.
14	BI0	Reading of input switch state deck A REC (S907)	<ul style="list-style-type: none"> • "H" when REC switch is on mode. • "L" when REC switch is off mode.
15	EO0	Mode selector deck A	• "L" in PLAY mode, "H" in other mode.
16	EO1	Playback equalizer (120μs/70μs) selector	• "L" in 120μs mode, "H" in 70μs mode.
17	EO2	Tapespeed (X1/X2) selector	• "L" in normal speed (X1), "H" in high speed (X2).
18	EO3	Dolby IC mode selector (REC/PLAY)	• "L" in REC mode, "H" in PLAY mode.
19	RST	Reset terminal	<ul style="list-style-type: none"> • Used to reset the microcomputer when power is thrown in. • Reset at "L".
20	TST	—	• Connection to GND.
21	DO3	Motor selector deck B	• "H" in motor deck B off, "L" in motor deck B on.
22	DO2	Motor selector deck A	• "H" in motor deck A off, "L" in motor deck A on.

Terminal No.	Symbol	Name	Function/operation
23	DO1	Scan 	<ul style="list-style-type: none"> • Scan signal for reading of PLAY switch input. 
24	DO0	Scan 	 <ul style="list-style-type: none"> • Scan signal for reading of REC switch input.
25	SNS0	Remote control signal input	• Input of serial signal from remote control jack.
26	SNS1	—	• Non connection.
27	V _{DD}	Power supply terminal	• Operative on 5 ± 0.5 volts.
28	OSC	Clock Oscillation	• Clock oscillation of about 300kHz.

■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

 <p>NO. 1</p>	<table><tr><td>N6634</td><td>14 Pin</td></tr><tr><td>AN6888</td><td>18 Pin</td></tr><tr><td>NE657N</td><td>24 Pin</td></tr><tr><td>MN1402STO</td><td>28 Pin</td></tr><tr><td>AN7016K</td><td>30 Pin</td></tr></table>	N6634	14 Pin	AN6888	18 Pin	NE657N	24 Pin	MN1402STO	28 Pin	AN7016K	30 Pin	<p>2SJ40CD 2SK381</p>  <p>Drain Gate Source</p>	<p>2SB621A-R 2SD592ANCQ</p>  <p>E C B</p>	 <p>E C B</p> <p>2SA1309AQS 2SC3311-Q 2SD1330R</p>
N6634	14 Pin													
AN6888	18 Pin													
NE657N	24 Pin													
MN1402STO	28 Pin													
AN7016K	30 Pin													
<p>UN4211</p>  <p>E C B</p>	<p>UN4113, UN4114</p>  <p>E C B</p>  <p>E C B</p>	<p>Anode</p>  <p>Cathode</p> <p>Ca 0  0 A</p> <p>MA165 SVD1SR35200</p>	<p>Anode</p>  <p>Cathode</p> <p>Ca 0  0 A</p> <p>MA4082M MA4062-M MA4075M</p>											
<p>Anode</p>  <p>Cathode</p> <p>Ca 0  0 A</p> <p>LN463YCPPU (YEL) LN863RCPP (RED)</p>	<p>Anode</p>  <p>Cathode</p> <p>Ca 0  0 A</p> <p>LN846RP (RED) LN346GP (GRN) LN446YP (YEL)</p>													

■ WIRING CONNECTION DIAGRAM



RESISTORS & CAPACITORS

Notes: * Important safety notice:

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

* Bracketed indications in Ref. No. columns specify the area.

Parts without these indications can be used for all areas.

Numbering System of Resistor

Example

ERD	25	F	J	102
Type	Wattage	Shape	Tolerance	Value
ERX	2	AN	J	471
Type	Wattage	Shape	Tolerance	Value
				47x10 ¹ (ohm)

Numbering System of Capacitor

Example

ECKD	1H	10Z	Z	F
Type	Voltage	Value	Tolerance	Peculiarity
ECEA	50		M	330
Type	Voltage		Peculiarity	Value
				(33x10 ⁰ microfarad)

Resistor Type	Wattage	Tolerance
ERD : Carbon	10 : 1/8W	J : $\pm 5\%$
ERG : Metal Oxide	12 : 1/2W	F : $\pm 1\%$
ERX : Metal Film	25 : 1/4W	G : $\pm 2\%$
ERQ : Fuse Type Metal	1A : 1W	K : $\pm 10\%$
ERD L : Carbon (chip)	18 : 1/8W	
ERD K : Metal Film (chip)	S2 : 1/4W	
ERC : Solid	S1 : 1/2W	
	2F : 1/4W	
	50 : 1/2W	
	2A : 2W	

Capacitor Type	Voltage	Tolerance
ECE : Electrolytic	0J : 6.3V	C : $\pm 0.25\text{pF}$
ECCD : Ceramic	1A : 10V	J : $\pm 5\%$
ECKD : Ceramic	1C : 16V	K : $\pm 10\%$
ECQM : Polyester	1E : 25V	Z : $\pm 80\%$
ECQP : Polypropylene	1H : 50V	-20%
	1V : 35V	P : $\pm 100\%$
	50 : 50V	-0%
ECG : Ceramic	05 : 50V	M : $\pm 20\%$
ECEADDDN : Non Polar	2H : 500V	
	Electrolytic	D : $\pm 0.5\text{pF}$
QCUC : Ceramic (Chip Type)	2A : 100V	G : $\pm 2\%$
ECUX : Ceramic (Chip Type)	1 : 100V	
ECF : Semiconductor	KC : 400V AC	
	KC : 125VAC (UL)	
	1J : 63V	
EECW : Liquid electrolyte double layer capacitor		

Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code
RESISTORS								
R1, R2	ERDS2T J101	001 152 2421 0	R301	ERDS2T J1R0	001 152 2419 4	E, EG, EH, XA		
R3, R4	ERDS2T J101	001 152 2421 0	R302, R303	ERDS2T J563	001 152 2446 1	R605	ERDS2T J101	001 152 2421 0
R5, R6	ERDS2T J101	001 152 2421 0	R304	ERDS1F J100	001 152 2612 5	EK, XL		
R7, R8	ERDS2T J225	001 152 3149 3	R304	ERDS2T J100	001 152 2420 1	R606	ERDS1F J220	001 152 2622 3
R9, R10	ERDS2T J820	001 152 2453 2	E, EG, EH, XA, XB			R606	ERDS2T J220	001 152 2430 9
R11, R12	ERDS2T J382	001 152 2439 0	R305	ERDS1F J100	001 152 2612 5	EK, XL		
R13, R14	ERDS2T J272	001 152 2354 4	EK, XL			R607, R608	ERDS2T J102	001 152 2346 4
R15, R16	ERDS2T J122	001 152 2423 8	R305	ERDS2T J100	001 152 2420 1	R613	ERDS2T J563	001 152 2446 1
R17, R18	ERDS2T J332	001 152 2357 1	E, EG, EH, XA, XB			R621, R622	ERQ14LKR22	001 190 0625 4
R19, R20	ERDS2T J154	001 152 2427 4	R308	ERDS2T J561	001 152 2364 2	EK, XL		
R21, R22	ERDS2T J273	001 152 2436 3	R309	ERDS1F J220	001 152 2622 3	R623, R624	ERG1ANJ560	001 151 0077 9
R23, R24	ERDS2T J472	001 152 2362 4	EK, XL			R625	ERG1ANJ120	001 151 0023 3
R25, R26	ERDS2T J102	001 152 2346 4	R309	ERDS2T J220	001 152 2430 9	EK, XL		
R27, R28	ERDS2T J330	001 152 2355 3	E, EG, EH, XA, XB			R626	ERD2FCJ6R8	001 152 2481 8
R29, R30	ERDS2T J472	001 152 2362 4	R310	ERDS2T J331	001 152 2356 2	EK, XL		
R31, R32	ERDS2T J182	001 152 2352 6	R401, R402	ERDS2T J242	001 152 3150 0	R701, R702	ERDS2T J363	001 152 2594 0
R33, R34	ERDS2T J182	001 152 2352 6	R403, R404	ERDS2T J471	001 152 2361 5	R703, R704	ERDS2T J472	001 152 2362 4
R37, R38	ERDS2T J272	001 152 2354 4	R405, R406	ERDS2T J473	001 152 2363 3	R705, R706	ERDS2T J154	001 152 2427 4
R39, R40	ERDS2T J183	001 152 2429 2	R407, R408	ERDS2T J432	001 152 2827 2	R707	ERDS2T J562	001 152 2445 2
R41, R42	ERDS2T J152	001 152 2350 8	R409, R410	ERDS2T J332	001 152 2357 1	R708, R709	ERDS2T J221	001 152 2431 8
R43, R44	ERDS2T J182	001 152 2352 6	R411, R412	ERDS2T J102	001 152 2346 4	R710, R711	ERDS2T J330	001 152 2355 3
R45	ERDS2T J271	001 152 2435 4	R413, R414	ERDS2T J274	001 152 2437 2	R801	ERDS2T J103	001 152 2347 3
EK, XL			R415, R416	ERDS2T J184	001 152 2588 8	R802	ERDS2T J102	001 152 2346 4
R45	ERDS2T J330	001 152 2355 3	R417, R418	ERDS2T J470	001 152 2442 5	R803	ERDS2T J103	001 152 2347 3
E, EG, EH, XA	ERDS2T J271	001 152 2435 4	R419	ERDS2T J222	001 152 2353 5	R805	ERDS2T J103	001 152 2354 4
R46			R420	ERDS2T J103	001 152 2347 3	R806	ERDS2T J332	001 152 2357 1
EK, XL	ERDS2T J330	001 152 2355 3	R423	ERDS2T J102	001 152 2346 4	R807, R808	ERDS2T J103	001 152 2347 3
E, EG, EH, XA	ERDS2T J274	001 152 2437 2	R424	ERDS2T J473	001 152 2363 3	R809	ERDS2T J103	001 152 2347 3
R47, R48	ERDS2T J154	001 152 2427 4	R601	ERDS2T J271	001 152 2435 4	R810	ERDS2T J563	001 152 2446 1
R49, R50			EK, XL			R811	ERDS2T J332	001 152 2357 1
E, EG, EH, XA, XB			R602	ERDS2T J470	001 152 2442 5	R812	ERDS2T J332	001 152 2439 0
R51, R52	ERDS2T J363	001 152 2594 0	E, EG, EH, XA			R813	ERDS2T J272	001 152 2354 4
R53, R54	ERDS2T J103	001 152 2347 3	EK, XL			R814	ERDS2T J103	001 152 2347 3
R55, R56	ERDS2T J563	001 152 2446 1	R602	ERDS2T J470	001 152 2442 5	R815	ERDS2T J563	001 152 2446 1
EK, XL			E, EG, EH, XA			R817	ERDS2T J271	001 152 2435 4
R57, R58	ERDS1F J151	001 152 2512 8	R603	ERDS2T J101	001 152 2421 0	R818, R819	ERDS2T J391	001 152 2360 6
EK, XL			R604	ERDS2T J102	001 152 2346 4	R820	ERDS2T J103	001 152 2347 3
R59, R60	ERDS2T J470	001 152 2442 5	R605	ERDS1F J100	001 152 2612 5	R821, R822	ERDS2T J273	001 152 2436 3
EK, XL								

Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code
R823	ERDS2T J152	001 152 2350 8	C23, C24	ECKD2H101KB	001 103 1610 6	EK, XL		
R824	ERDS2T J273	001 152 2436 3	C25, C26	ECKD1H561KB	001 103 1576 1	C403, C404	ECQB1H472JZ	001 106 3380 8
R825	ERDS2T J152	001 152 2350 8	C27, C28	ECQB1H332JZ	001 106 3316 6	C405, C406	ECQM1H333JZ	001 106 0779 1
R826	ERDS2T J102	001 152 2346 4	C29, C30	ECQB1H223JZ		C407, C408	ECQM1H473JZ	001 106 0810 9
R827	ERDS2T J820	001 152 2453 2	C31, C32	ECQB1H123JZ	001 106 3239 2	C409, C410	ECQM1H334JZ	001 106 0786 2
EK, XL			C33, C34	ECQB1H123JZ	001 106 3239 2	C411, C412	ECQV1H104JZ	001 106 2571 7
R828, R829	ERDS2T J103	001 152 2347 3	C35, C36	ECFR1E153KAY	001 108 1055 6	C413, C414	ECKD1H122KB	001 103 1459 5
R830	ERDS2T J123	001 152 2424 7	C37, C38	ECKD1H223PF	001 103 1510 9	C415, C416	ECKD1H152KB	001 103 1467 5
R831	ERDS2T J562	001 152 2445 2	C39, C40	ECEA1HK010	001 120 0341 5	C601, C602	ECEA0J5102	001 120 0152 8
R834	ERDS2T J103	001 152 2347 3	C41, C42	ECEA1HK2R2B	001 120 0346 0	C603	ECEA0J222	001 120 3161 5
R835	ERDS2T J123	001 152 2424 7	C43, C44	ECEA1EK4R7	001 120 0294 5	C604, C605	ECKD1H223PF	001 103 1510 9
R836	ERDS2T J154	001 152 2427 4	C45, C46	ECEA1EK4R7	001 120 0294 5	C606	ECKD1H223PF	001 103 1510 9
R837	ERDS2T J563	001 152 2446 1	C47	ECKD1H223PF	001 103 1510 9	C607, C608	ECEA1AU221	001 120 3131 1
R838	ERDS2T J154	001 152 2427 4	C301	ECKD1H392KB	001 103 1547 6	C609, C610	ECEA1CU471	001 120 3202 3
CAPACITORS			C302	ECFR1E682KAY		C611	ECEA16V1000	001 120 2545 7
C1, C2	RCBS1H391KBY	001 103 8540 5	C303, C304	ECFR1E222KAY	001 108 0942 8	C612	ECKD2H682PE	
C3, C4	RCBS1H271KBY	001 103 5611 9	C305	ECKD1H223PF	001 103 1510 9	C701, C702	ECEA1HK2R2B	001 120 0346 0
C5, C6	ECQB1H123JZ	001 106 3239 2	C306	ECFD1V473KD	001 108 0256 3	C703	ECKD1H223PF	001 103 1510 9
C7, C8	ECEA0JU101	001 120 2829 8	C307	ECQ1P1183JZ	001 106 1083 2	C802	ECEA1HK4R7	001 120 0338 0
C9, C10	ECEA1EK4R7	001 120 0294 5	C308	ECEA1CKS100	001 120 2600 7	C803	ECCD1H101K	001 103 0341 2
C11, C12	ECBT1H681KB	001 103 3535 2	E, EG, EH, XA			C804	ECKD1H223PF	001 103 1510 9
C15, C16	ECKD1H122KB	001 103 1459 5	EK, XL	ECEA1CU220	001 120 2906 2	C806	ECEA1EK4R7	001 120 0294 5
C17, C18	ECCD1H181K	001 103 0466 0	C309, C310	RCBS1H271KBY	001 103 5611 9	C807	ECEA1AU221	001 120 3131 1
C19, C20	ECEA1HKR33	001 120 0337 1	C311	ECEA1CKS100	001 120 2600 7	C808, C809	ECFR1E682KAY	
C21, C22	ECEA1HK010	001 120 0341 5	C321	ECEA1CU220	001 120 2906 2	C810	ECQM1H224JZ	001 106 0746 0

REPLACEMENT PARTS LIST

Notes: * Important safety notice:

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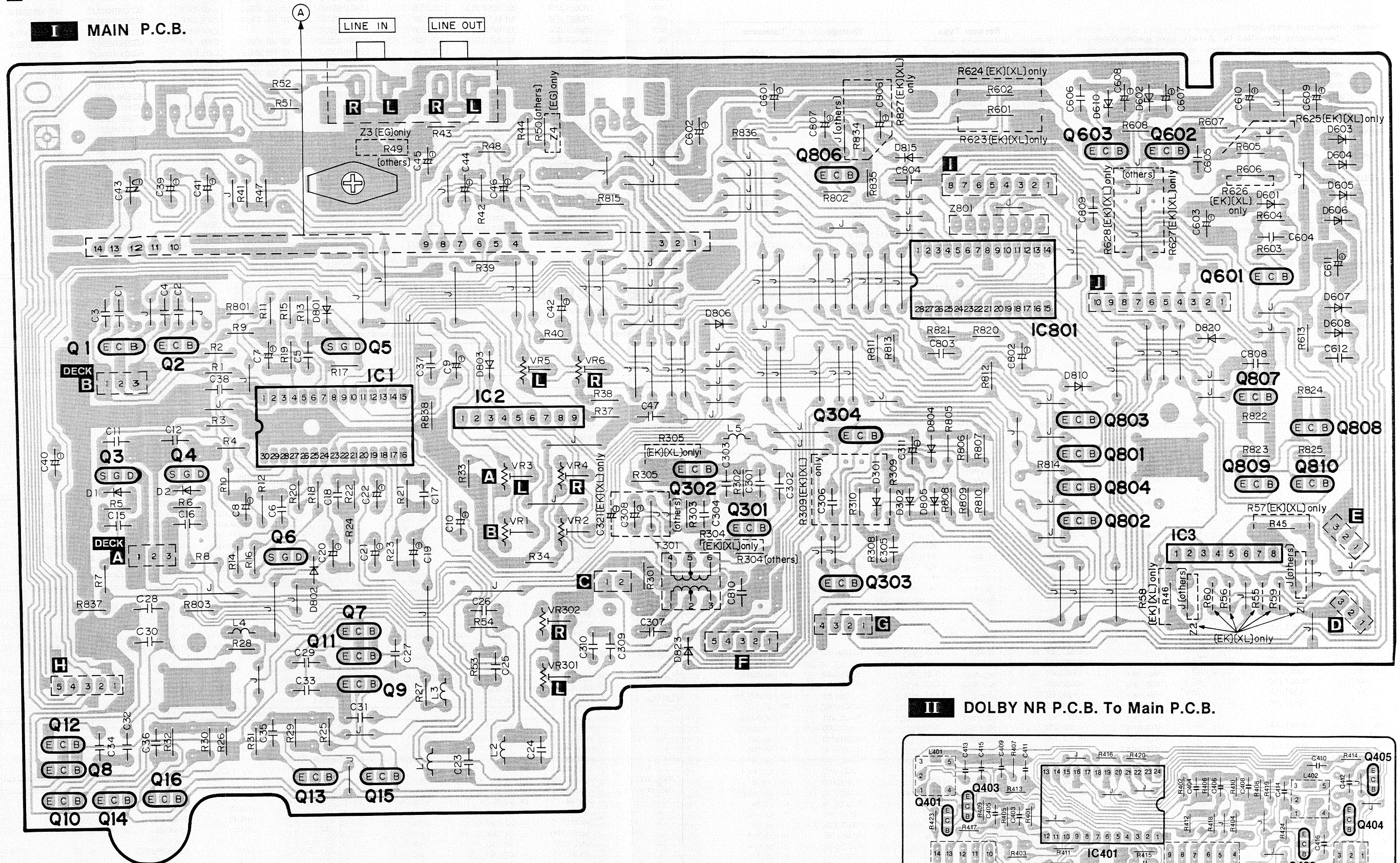
* Blacked indications in Ref. No. columns specify the area.

Parts without these indications can be used for all areas.

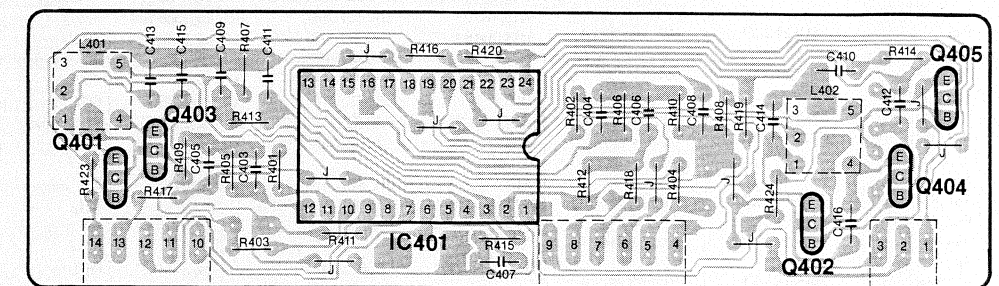
Ref. No.	Part No.	Part Code	Description	Ref. No.	Part No.	Part Code	Description
INTEGRATED CIRCUITS				D809, D810	MA165	001 032 0494 0	DIODE
IC1	AN7016K	001 061 4629 4	I.C.	D811, D812	MA165	001 032 0494 0	DIODE
IC2	MM6634	001 061 0884 7	I.C.	D813, D814	MA165	001 032 0494 0	DIODE
IC3	MS218L	001 060 3798 7	I.C., OPERATION AMP.	D815	MA165	001 032 0494 0	DIODE
IC401	NE657N	001 060 7796 3	I.C.	D816	LN846RP	001 032 3839 3	L.E.D
IC701	AN6888	001 060 7693 9	I.C.	D817	LN346GP	001 032 3829 5	L.E.D
IC801	MN1402ST0	001 061 4933 9	INTEGRATED CIRCUIT	D818	LN446YP	001 032 3834 8	L.E.D
TRANSISTORS				D819	LN846RP	001 032 3839 3	L.E.D
Q1, Q2	2SD1450R	001 030 4366 1	TRANSISTOR	D820, D821	MA165	001 032 0494 0	DIODE
Q3, Q4	2SJ40CD	001 030 2807 5	TRANSISTOR	D822, D823	MA165	001 032 0494 0	DIODE
Q5, Q6	2SJ40CD	001 030 2807 5	TRANSISTOR	VARIABLE RESISTORS			
Q7, Q8	2SC3311A-Q	001 030 5279 5	TRANSISTOR	VR1, VR2	EVND4AA00B24	001 180 2244 1	VARIABLE RESISTOR
Q9, Q10	2SA1309AQS	001 030 4846 0	TRANSISTOR	VR3, VR4	EVND4AA00B24	001 180 2244 1	VARIABLE RESISTOR
Q11, Q12	2SA1309AQS	001 030 4846 0	TRANSISTOR	VR5, VR6	EVND4AA00B14	001 180 2242 3	V.R., 10KΩ(B)
Q13, Q14	2SC3311A-Q	001 030 5279 5	TRANSISTOR	VR7, VR8	EWABP1X05A54	001 174 6870 1	VARIABLE RESISTOR
Q15, Q16	2SC3311A-Q	001 030 5279 5	TRANSISTOR	VR301, VR302	EVND4AA00B15	001 180 2243 2	VARIABLE RESISTOR
Q301, Q302	2SC3311A-Q	001 030 5279 5	TRANSISTOR	VR801, VR802	EVN49C00YB14	001 180 3171 7	V.R., 10KΩ(B)
Q303	2SD592ANCQ	001 030 1752 7	TRANSISTOR	VR803	EVN49C00YB14	001 180 3171 7	V.R., 10KΩ(B)
Q304	UN4211	001 030 4033 9	TRANSISTOR	COILS AND TRANSFORMERS			
Q401, Q402	2SC3311A-Q	001 030 5279 5	TRANSISTOR	L1, L2	SLQX303-1KT	001 211 3955 3	COIL
Q403, Q404	2SC3311A-Q	001 030 5279 5	TRANSISTOR	L3, L4	SLQX272-1YT	001 211 0649 2	CHOCK COIL
Q405	2SA1309AQS	001 030 4846 0	TRANSISTOR	L5	ELEPK271KA	001 211 0822 3	COIL FILTER
Q601, Q602	2SD592ANCQ	001 030 1752 7	TRANSISTOR	L401, L402	QLB40048	001 210 7275 9	COIL
Q603	2SB621A-R	001 030 0668 6	TRANSISTOR	T301	SL09C19-K	001 211 2472 1	OSCILLATOR COIL
Q801, Q802	UN4113	001 030 2900 9	TRANSISTOR	T601	SLT5K232SA	001 202 7351 2	POWER TRANSFORMER
Q803, Q804	UN4113	001 030 2900 9	TRANSISTOR	E, EG, EH			
Q806	2SA1309AQS	001 030 4846 0	TRANSISTOR	T601	SLT5K233SA	001 202 8312 3	POWER TRANSFORMER
Q807, Q808	2SD592ANCQ	001 030 1752 7	TRANSISTOR	XA, XB			
Q809, Q810	UN4114	001 030 4832 6	TRANSISTOR	T601	SLT5K234SA	001 202 7979 0	POWER TRANSFORMER
Q811, Q812	2SD381D	001 030 7411 1	TRANSISTOR	EK, XL			
DIODES				COMPONENT COMBINATIONS			
D1, D2	MA165	001 032 0494 0	DIODE	Z1, Z2	EXRP150K104T	001 230 0410 6	COMPONENT COMBINATION
D301, D302	MA165	001 032 0494 0	DIODE	EK, XL			
D601	MA4062-M	001 032 7211 7	DIODE	Z3, Z4	EXRP222K154T		COMPONENT COMBINATION
D602	MA4062M	001 032 4955 6	DIODE	EG			
D603, D604	SVD1SR35200A	001 032 3951 4	RECTIFIER	Z801	EXBF7E562J	001 230 1578 9	COMPONENT COMBINATION
D605, D606	SVD1SR35200A	001 032 3951 4	RECTIFIER	SWITCHES			
D607, D608	SVD1SR35200A	001 032 3951 4	RECTIFIER	S1, S3	SSH3709	003 435 6325 3	PUSH SWITCH
D610	MA4075M	001 032 7212 6	DIODE	S4	SSH3709	003 435 6325 3	PUSH SWITCH
D704A, D704B	LN463YCPPU	001 032 7887 9	L.E.D	S801	SSH1225	003 435 6277 4	PUSH SWITCH
D704C, D704D	LN463YCPPU	001 032 7887 9	L.E.D	S802	SSR187-1	003 430 2201 5	SW, VOLTAGE SELECT
D704E, D704F	LN463YCPPU	001 032 7887 9	L.E.D	XA, XB			
D704G, D704H	LN863RCPP	001 032 7263 5	L.E.D	S901, S902	SSP83	003 434 0996 9	SW
D704I, D704J	LN863RCPP	001 032 7263 5	L.E.D	S903	SSP83	003 434 0996 9	SW
D704K, D704L	LN863RCPP	001 032 7263 5	L.E.D	S904	LSA-1150AU	003 434 0994 1	SWITCH
D801, D802	MA165	001 032 0494 0	DIODE	S905, S906	SSP83	003 434 0996 9	SW
D803, D804	MA165	001 032 0494 0	DIODE	S907	LSA-1150AU	003 434 0994 1	SWITCH
D805, D806	MA165	001 032 0494 0	DIODE	S907	SSP83	003 434 0996 9	SW
D807, D808	MA165	001 032 0494 0	DIODE	S908	LSA-1150AU	003 434 0994 1	SWITCH

PRINTED CIRCUIT BOARDS

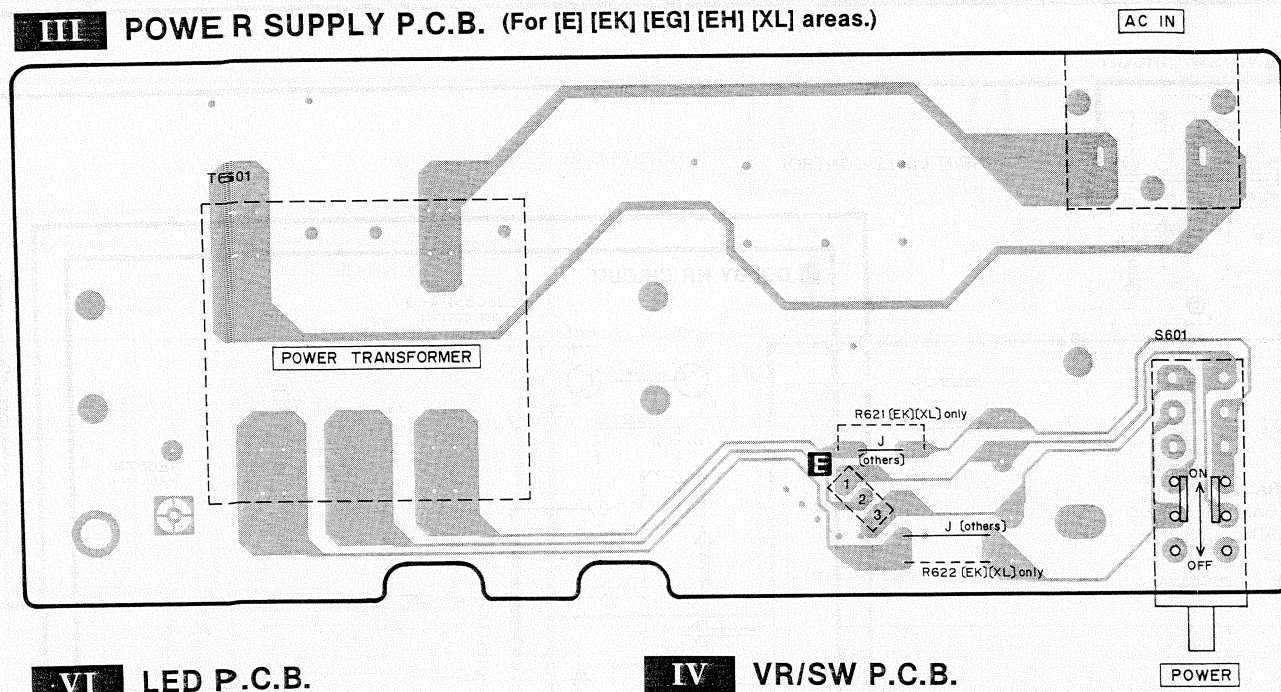
I MAIN P.C.B.



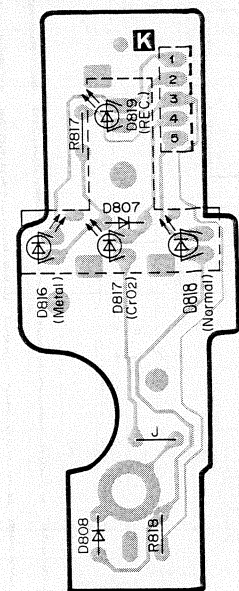
II DOLBY NR P.C.B. To Main P.C.B.



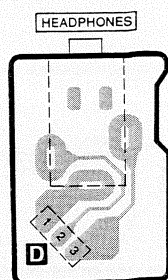
III POWER SUPPLY P.C.B. (For [E] [EK] [EG] [EH] [XL] areas.)



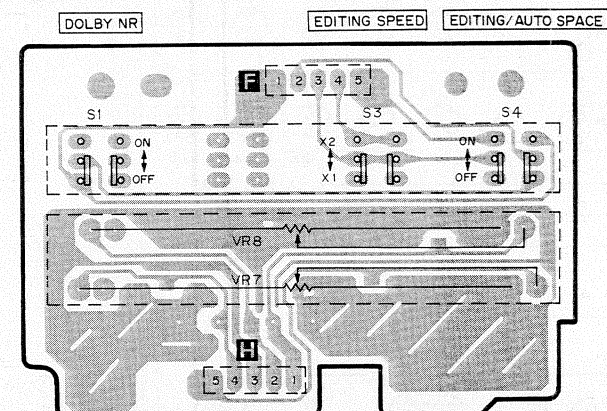
VI LED P.C.B.



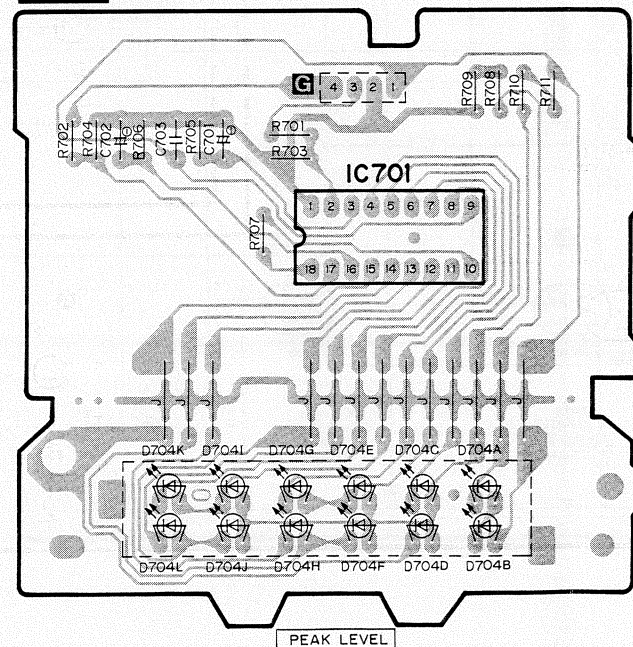
IX HEADPHONES P.C.B.



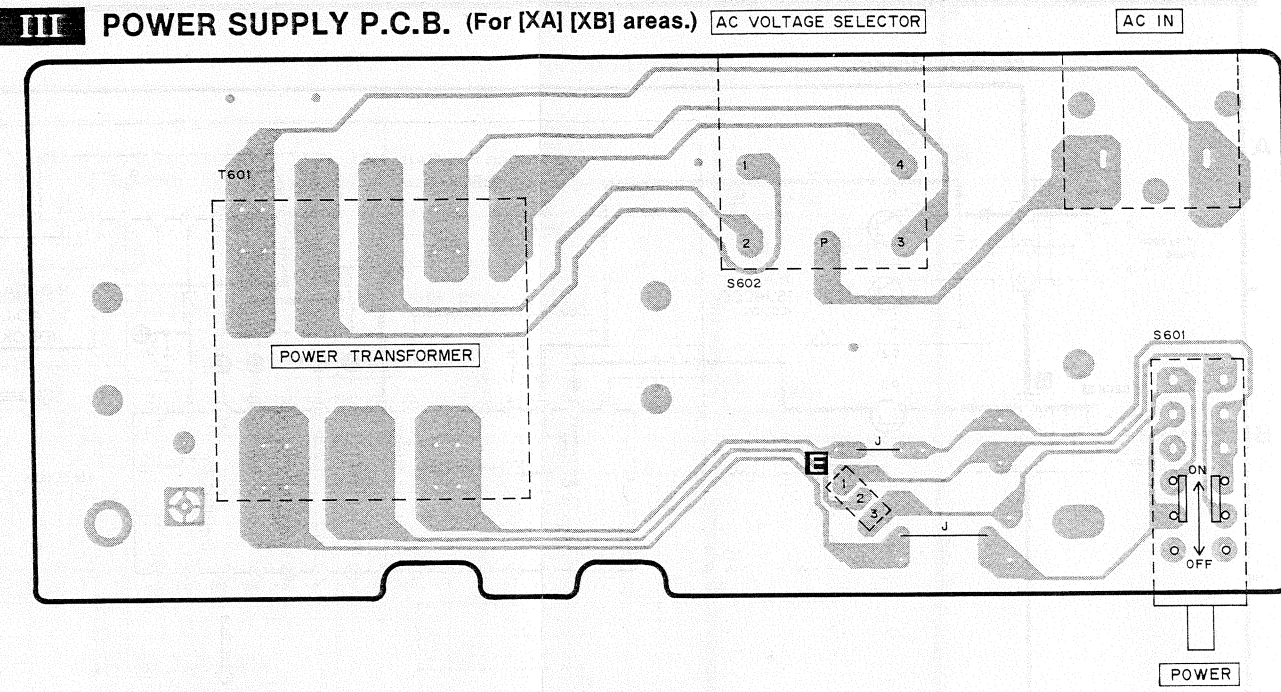
IV VR/SW P.C.B.



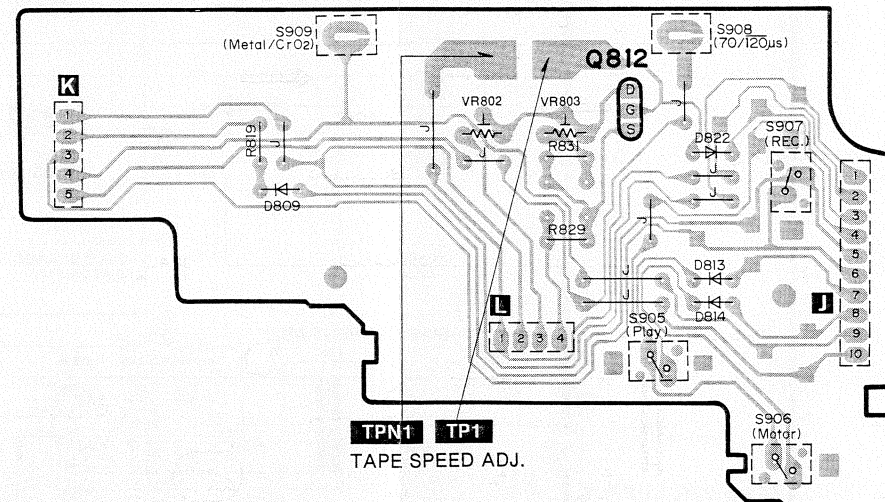
V LED METER P.C.B.



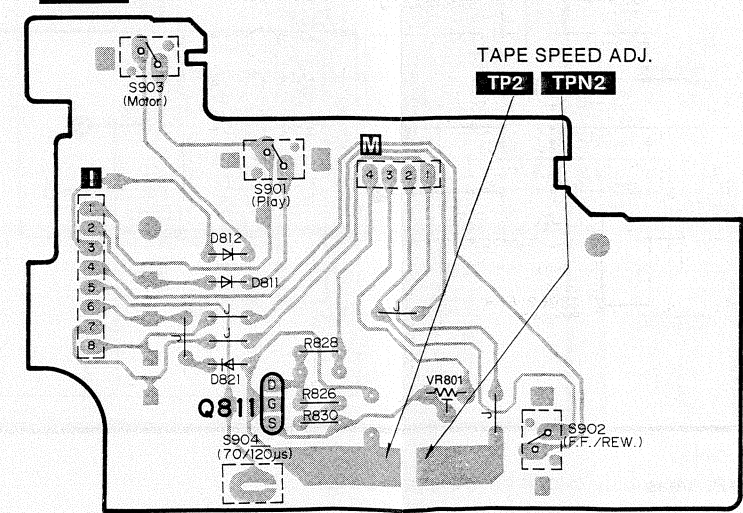
III POWER SUPPLY P.C.B. (For [XA] [XB] areas.)

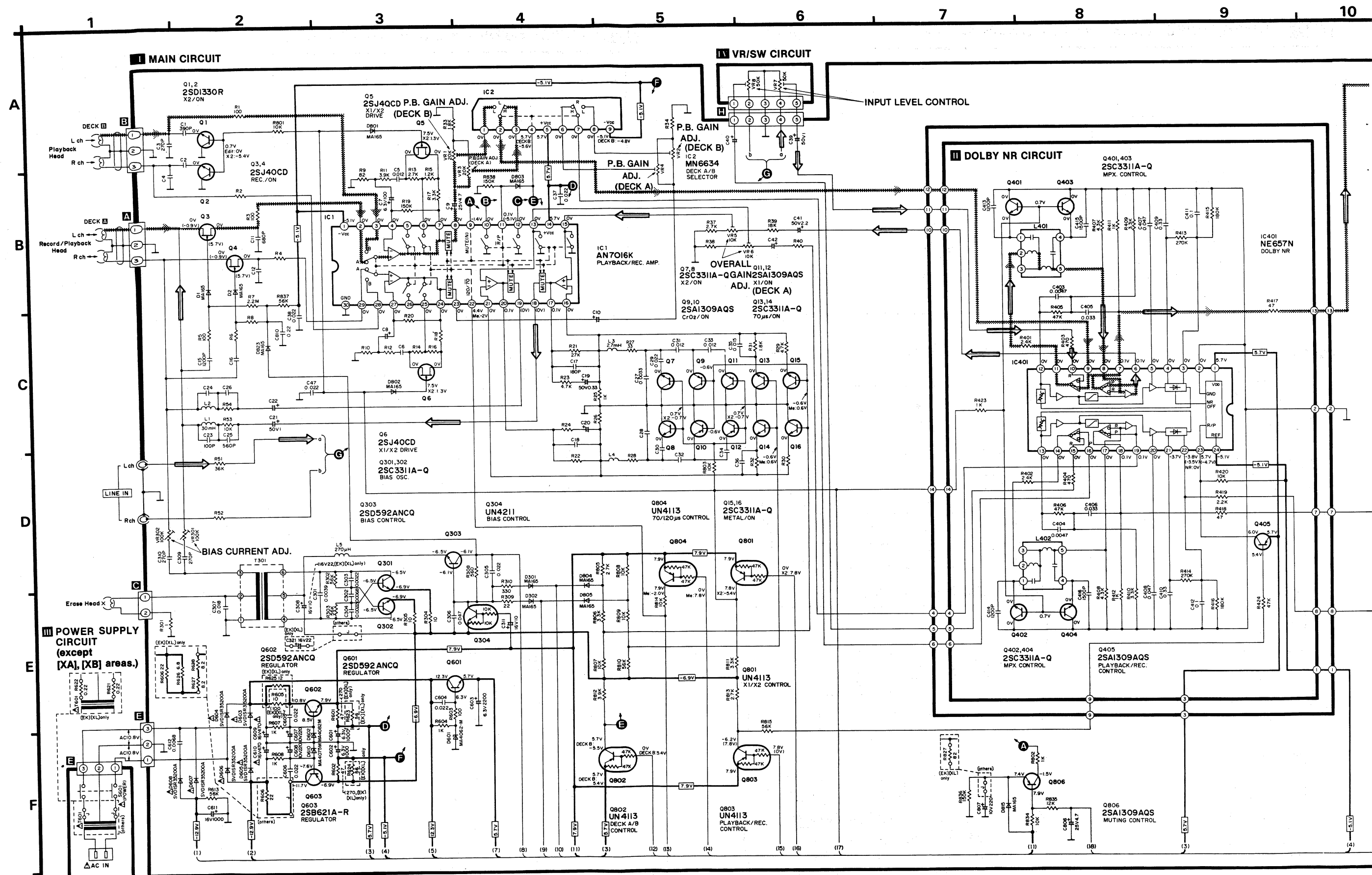


VII MECHANISM P.C.B. (DECK [A])



VIII MECHANISM P.C.B. (DECK [B])





Note:
Power supply circuit of "[XA], [XB] areas"
on page 24.

11

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13

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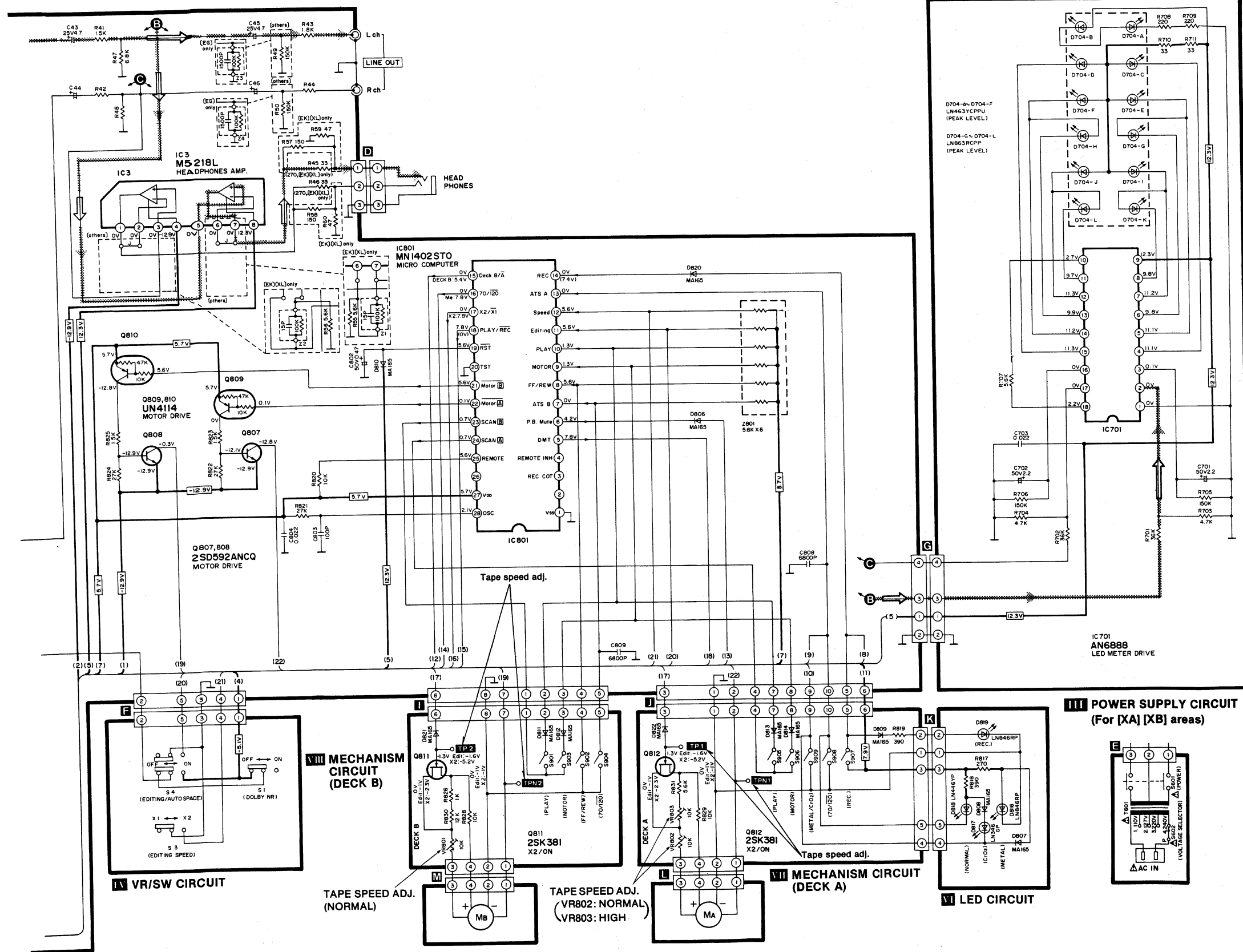
15

16

17

SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)



Notes:

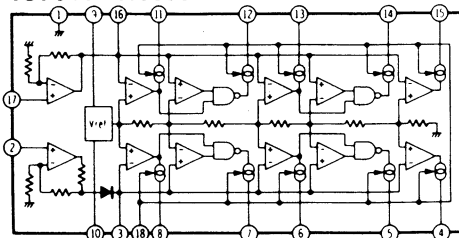
- S1 : Editing switch in "off" position.
- S2 : Editing speed select switch in "X1" position.
- S3 : Dolby NR switch in "off" position.
- S601 : Power switch in "off" position.
- S602 : Voltage selector switch in "240V" position.
(110V ← 127V ← 220V ← 240V) ([XA], [XB] areas only)
- S901 : DECK B play switch in "off" position.
- S902 : DECK B FF/REW switch in "off" position.
- S903 : DECK B motor switch in "off" position.
- S904 : DECK B 70/120μs detection switch in "off" position.
- S905 : DECK A play switch in "off" position.
- S906 : DECK A motor switch in "off" position.
- S907 : DECK A rec switch in "off" position.
- S908 : DECK A 70/120μs detection switch in "off" position.
- S909 : DECK A Metal/CrO₂ detection switch in "off" position.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
1K=1,000 (Ω), 1M=1,000k (Ω)
- Capacity are in micro-farads (μF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
- () Voltage values at record mode.
- X2 Voltage values at Editing speed X2 mode.
- Me Voltage values at Metal tape mode.
- NR Voltage values at Dolby NR mode.
- Edit Voltage values at Editing mode.
- DECK B Voltage values at DECK B Playback.
- For measurement us EVM.
- () indicates B (bias).
- () indicates the flow of the playback signal.
- () indicates the flow of the record signal.
- Important safety notice
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

* Caution !

- IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.
- * Cover the parts boxes made of plastics with aluminum foil.
- * Ground the soldering iron.
- * Put a conductive mat on the work table.
- * Do not touch the legs of IC or LSI with the fingers directly.

EQUIVALENT CIRCUIT

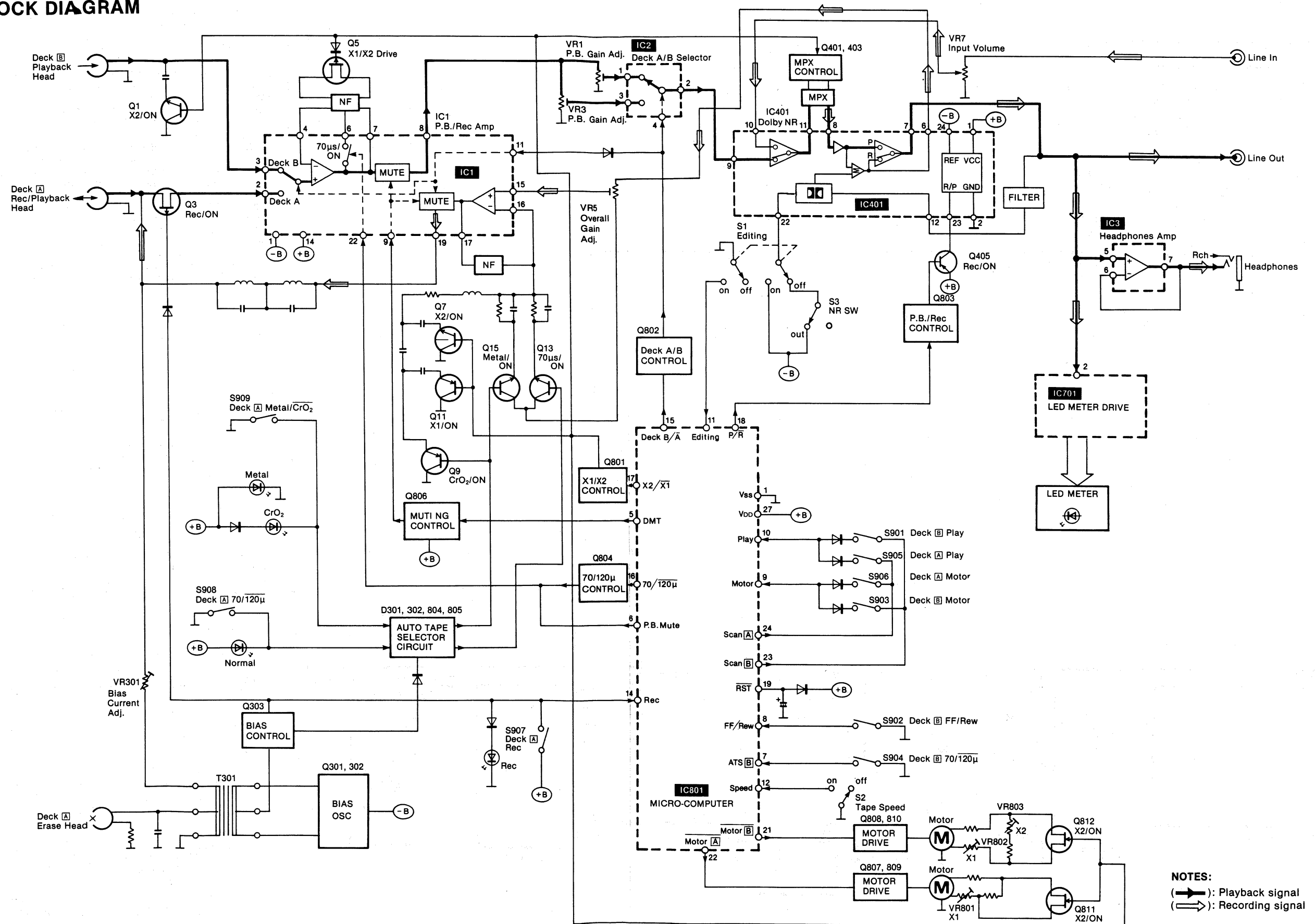
IC701: AN6888



SPECIFICATIONS * Input level control... MAX

Playback S/N ratio * Test tape... QZZCFM	Greater than 45dB
Overall distortion * Test tape ... QZZCRA for Normal ... QZZCRX for CrO ₂ ... QZZCRZ for Metal	Normal Less than 3.5% CrO ₂ , Metal ... Less than 4%
Overall S/N ratio * Test tape... QZZCRA	Greater than 43dB (without NAB filter)

■ BLOCK DIAGRAM



REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Code	Description	Ref. No.	Part No.	Part Code	Description
CASSETTE DECK				164	SMQT1589	016 718 3304 3	LEVER
101	SJH103	001 270 1833 9	MAGNETIC HEAD (DECK B)	166	SMQ4872	016 718 0323 2	EJECT KICK LEVER
101	RJH4C35GZAM	001 270 1680 8	MAGNETIC HEAD (DECK A)	168	SMQ4880	016 718 0325 0	FUNCTION LEVER W/SP
102	SMQ4596	016 726 0239 1	SPRING	169	SMQT1590	016 630 1711 5	SUB CHASSIS
103	RJH7E5YAM	001 270 1681 7	MAGNETIC HEAD (DECK A)	170	SMQ4888	016 728 0089 7	MAIN GEAR SPRING
103	SJH97	001 270 1682 6	MAGNETIC HEAD (DECK B)	171	SMQ4890	016 728 0090 4	TRIGGER ARM SPRING
104	SMQ4768	016 630 0142 0	HEAD BASE	172	SMQ4892	016 717 0150 0	TRIGGER ARM ASSEMBLY
105	RFD135ZA	015 845 0361 4	PANEL	173	SMQ4894	016 745 0071 0	MAIN GEAR
106	SMQT1581	005 500 5750 4	SCREW	174	SMQ4896	016 745 0130 6	PAUSE GEAR
107	SMQ4770	016 726 0242 6	HEAD PANEL SPRING	175	SMQT1591	016 752 0121 6	MAIN BELT
108	SMQ4772	016 740 0061 7	TAKE UP ROLLER ASSY	176	SMQT1592	016 756 0080 8	FLYWHEEL ASSY
109	RFS249ZA	015 726 2227 5	SPRING	177	SMQ4902	016 717 0151 9	TRIGGER ARM
110	SMQ4774	016 652 0304 8	FUNCTION LEVER STOPPER	178	SMQ4904	016 728 0091 3	TRIGGER ARM SPRING
111	SMQ4776	016 717 0146 6	PINCH ROLLER ASSY	179	SMQ4906	016 717 0152 8	PAUSE ARM ASSY
112	SMQT1458	016 630 0224 9	CHASSIS	180	SMQ4909	016 726 0780 5	SPRING
113	SMQ4778	016 718 0306 3	REC SAFETY LEVER (DECK A)	181	SMQ4910	016 643 0445 7	LIFT ARM COLLAR
114	SMQ4780	016 727 0051 6	PACK HOLDER SPRING	182	SMQT1593	016 717 0243 6	ARM
115	SMQ4782	016 757 0032 1	FLYWHEEL METAL	183	RFS248ZA	015 726 2226 6	SPRING
116	RFY183ZA	015 718 3291 9	LEVER	184	SMQT1731	016 650 5188 4	MOTOR ASS'Y
117	SMQ4786	016 650 0555 1	COLLAR	185	SMQT1633	016 653 0621 3	FM- HOLD PLATE
118	SMQT1629	016 726 0778 9	SPRING	186	SMQ4916	016 630 1710 6	MOTOR RUBBER
119	SMQ4788	016 650 0556 0	COLLAR	187	SMQT1595	016 726 0251 5	SPRING
120	SMQ4790	016 718 0308 1	CONTROL LEVER	188	SMQ4922	016 718 0326 9	KICK LEVER
121	RFS379Z	016 726 0430 4	SPRING	191	SMQ4858	016 726 0247 1	BUTTON LEVER SPRING
122	SMQ4792	016 728 0088 8	BRAKE SPRING	192	SMQT1453	016 726 0423 3	SPRING
123	SMQ4794	016 717 0147 5	BRAKE ARM ASSEMBLY	193	SMQT1598	016 650 5194 6	BRACKET
124	SMQT1630	016 726 0777 0	SPRING	194	SMQT1680	016 643 1042 8	FELT
125	SMQ4800	016 765 0025 4	SUPPLY REEL ASSEMBLY	195	RFS378Z	016 726 0610 2	SPRING
126	SMQT1636	016 726 0779 8	SPRING	205	RFS378Z	016 726 0610 2	SPRING
127	SMQ4804	016 765 0026 3	TAKE UP REEL ASSEMBLY	SCREWS, WASHERS & NUTS			
128	SMQ4806	016 652 0305 7	SENSING PIECE	131	SMQ4168	016 650 0538 2	COLLAR
129	SMQ4808	016 726 0244 4	SENSING PIECE SPRING	134	SMQT1582	005 500 5751 3	SCREW
130	SMQ4810	016 745 0069 4	FF GEAR	147	SMQ4838	005 500 4519 3	COLLAR SCREW
132	RFU16ZA	015 630 1587 9	PLATE	165	SMQ4870	016 650 0562 2	COLLAR SCREW
133	SMQ4814	016 718 0309 0	T. ROLLER KICK LEVER	167	SMQ4878	016 643 0444 8	COLLAR SCREW
135	SMQ4818	016 718 0310 7	SENSING LEVER	189	SMQ4942	016 643 0448 4	COLLAR SCREW
136	SMQ4820	016 726 0245 3	SENSING LEVER SPRING	196	SMQ4936	005 513 2293 9	NYLON WASHER
137	SMQ4822	016 740 0062 6	PULLEY	197	XSN2*8	005 500 1301 1	SMALL SCREW
138	SMQ4824	016 752 0078 2	FULL AUTO BELT	198	SMQT1634	005 500 5867 2	SCREW
139	SMQ4826	016 745 0070 1	CAM GEAR	199	XWG2	005 513 1459 9	WASHER
140	SMQT1631	016 726 0781 4	SPRING	200	SMQ4944	005 500 2957 3	SCREW
141	SMQT1583	016 717 0242 7	ARM	201	XYN2+C4	005 503 0548 9	SCREW
142	SMQT1635	016 752 0123 4	FLAT BELT	202	XYN2+C6	005 500 1297 0	SCREW
143	SMQ4832	016 718 0311 6	RF SLIDING LEVER ASSY	203	XSN26+C5	005 500 1361 9	SCREW
144	SMQ4834	016 718 0312 5	AUTO LEVER	204	XYN2+C5	005 500 1291 6	SCREW
145	SMQ4836	016 643 0447 5	AUTO LEVER COLLAR	206	RFE133Z	005 512 0346 6	RETAINING RING
146	SMQ4836	016 630 0143 9	BUTTON BASE(L)	207	SMQ4930	005 513 2291 1	POLYSLIDE WASHER
148	SMQ4840	016 630 0144 8	BUTTON BASE(R)	208	XUC12FT	005 512 0116 8	WASHER
149	SMQT1585	016 643 0920 1	SPACER (DECK A)	209	XUC2FT	005 512 0126 6	E-RING
150	SMQT1586	016 718 3306 1	LEVER (DECK A)	210	XYN26+C6	005 503 0554 1	SMALL SCREW
151	SMQ4846	016 718 0315 2	PLAY BUTTON LEVER	211	XUC15FT	005 512 0121 1	WASHER
152	SMQ4848	016 718 0316 1	RWD BUTTON LEVER	212	SMQ4932	005 513 2292 0	NYLON WASHER
153	SMQ4850	016 718 0317 0	FF BUTTON LEVER	213	SMQ4934	005 500 2956 4	SCREW
154	SMQ4852	016 718 0318 9	STOP BUTTON LEVER	214	XTN26*3	005 501 3346 5	TAPPING SCREW
155	SMQ4854	016 718 0319 8	PAUSE BUTTON LEVER ASSY	215	SMQT1454	005 513 4008 0	WASHER
156	SMQ4856	016 726 0246 2	BUTTON LEVER SPRING	216	SQM4918	016 643 0446 6	COLLAR SCREW
157	SMQ4858	016 726 0247 1	BUTTON LEVER SPRING	217	RFN73Z	016 643 0778 9	SPACER
158	SMQ4860	016 726 0248 0	PAUSE LEVER SPRING				
159	SMQ2444	016 718 0205 7	LEVER				
160	SMQ4862	016 652 0306 6	P STOPPER				
161	SMQT1588	016 726 0770 7	SPRING				
162	SMQT1587	016 718 3305 2	LEVER				
163	RFS253ZA	015 726 2232 8	SPRING				

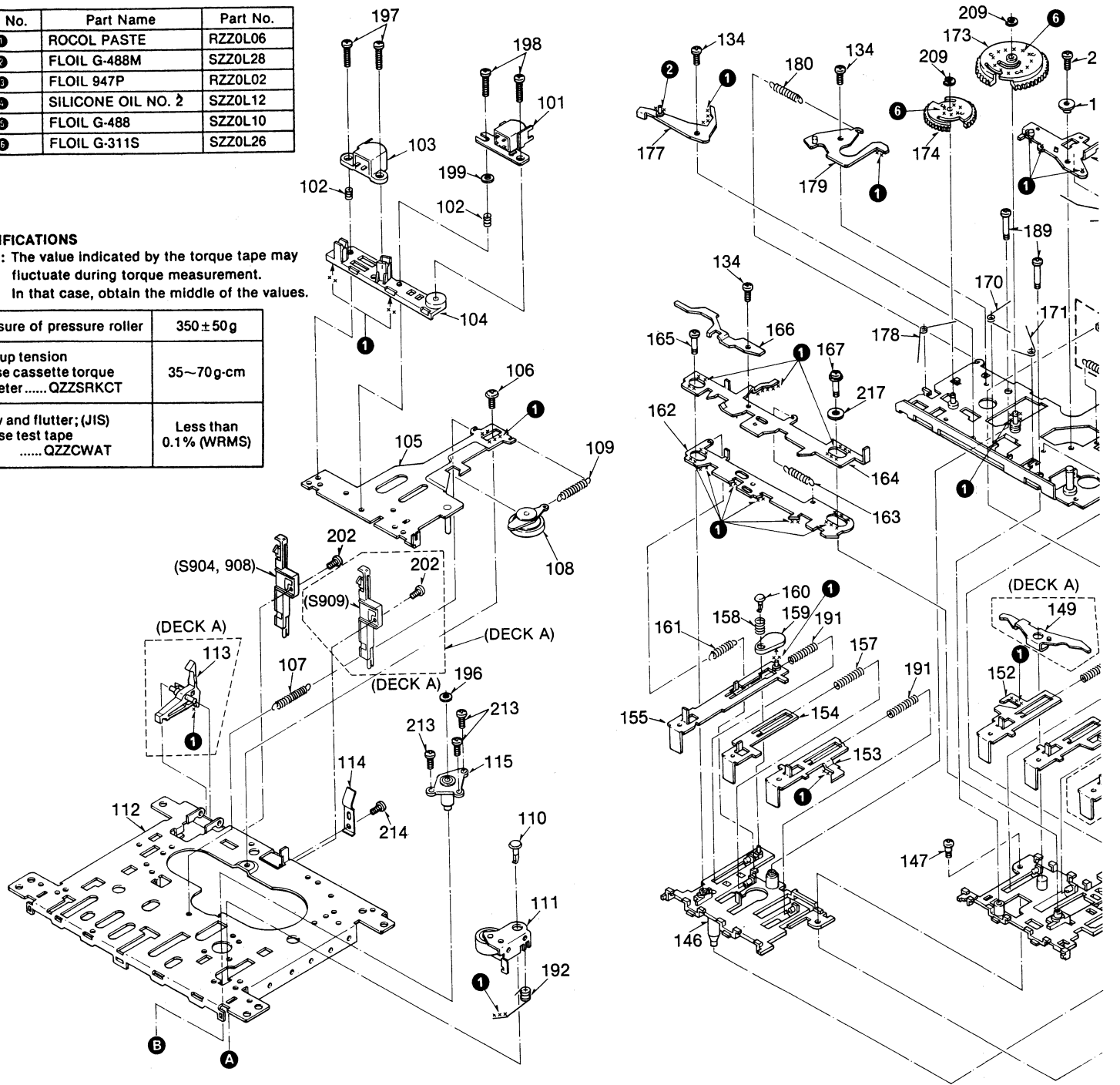
MECHANICAL PARTS LOCATION

NOTES:
• When changing mechanism parts, apply the specified grease to the are marked "x x" shown in the drawing "Mechanical Parts Location".

Ref. No.	Part Name	Part No.
①	ROCOL PASTE	RZZOL06
②	FLOIL G-488M	SZZOL28
③	FLOIL 947P	RZZOL02
④	SILICONE OIL NO. 2	SZZOL12
⑤	FLOIL G-488	SZZOL10
⑥	FLOIL G-311S	SZZOL26

SPECIFICATIONS
NOTE: The value indicated by the torque tape may fluctuate during torque measurement. In that case, obtain the middle of the values.

Pressure of pressure roller	350 ± 50 g
Takeup tension * Use cassette torque meter.....QZZSRKCT	35~70 g·cm
Wow and flutter; (JIS) * Use test tapeQZZCWAT	Less than 0.1% (WRMS)



202	197	202	196	199	198	191	217	209	209	210	1E
214	213	213	213	192	192	191	191	189	181	1E	
177	161	155	160	180	162	163	179	157	178	174	170
165	166	146	154	158	159	153	167	164	147	152	149
134	134										
113	112	107	114	102	103	104	115	102	110	101	109
				105				106	111	108	

REPLACEMENT PARTS LIST

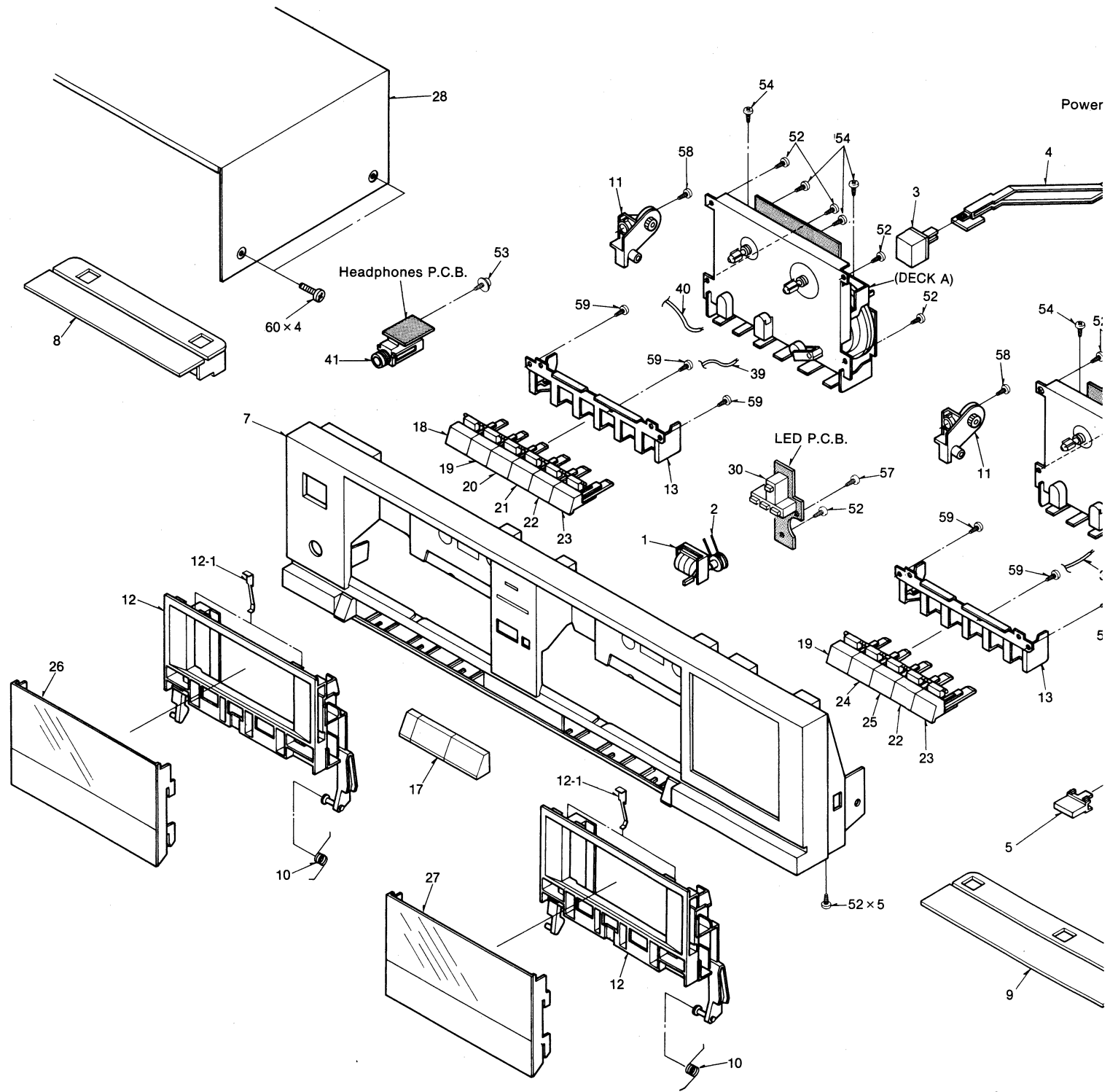
Notes: * Important safety notice:
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

* Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.
* ⊗-marked parts are used for black only, while ⊕-marked parts are for silver type only.
* Part other than ⊗- and ⊕-marked are use for both black and silver type.

Ref. No.	Part No.	Part Code	Description	Ref. No.	Part No.	Part Code	Description
CABINET AND CHASSIS				21	⊗	SBC869A	016 702 6654 8 BUTTON
1	SJN20	016 892 0121 5	TAPE COUNTER	22	⊕	SBC805A-1	016 702 6419 7 BUTTON
2	SMQ20018	016 754 0054 0	ANGULAR BELT	22	⊗	SBC870A	016 702 6655 7 BUTTON
3	⊕	SBC666	016 702 5545 6 BUTTON, POWER	23	⊕	SBC806A-1	016 702 6417 9 BUTTON
3	⊗	SBC666-5	016 702 6679 9 BUTTON, POWER	23	⊗	SBC871A	016 702 6656 6 BUTTON
4		SUB255	016 712 0316 1 ROD	24	⊕	SBC803B-1	016 702 6476 8 BUTTON
5	⊗	SBC944	016 702 7018 6 BUTTON	24	⊗	SBC868B	016 702 6652 0 BUTTON
5	⊕	SBC944-1	016 702 7117 4 BUTTON	25	⊕	SBC804B-1	016 702 6474 0 BUTTON
6		SKMST11-KE	016 800 3137 9 CABINET BODY	25	⊗	SBC869B	016 702 6653 9 BUTTON
6		SKMST11-KG	016 800 3134 2 CABINET BODY	26	⊗	SGE1893	016 820 0603 4 CASSETTE LID
6	EG, EH	SKMST11-KK	016 800 3143 1 CABINET BODY	26	⊕	SGE1893-2	016 820 0615 0 CASSETTE LID
6	EK	SKMST11-KL	016 800 3135 1 CABINET BODY	27	⊗	SGE1893-1	016 820 0602 5 CASSETTE LID
6	XL	SKMST11-KX	016 800 3136 0 CABINET BODY	27	⊕	SGE1893-3	016 820 0616 9 DOOR, LID
6	XA, XB	SKL293	016 828 0269 8 RUBBER	28	⊗	SKC2090K39	016 800 3071 0 CABINET BODY
6-1	⊗	SGYST11-KE	016 840 7879 8 FRONT PANEL (K)	28	⊕	SKC2090S98	016 800 3133 3 CABINET BODY
7	⊕	SGYST11-SE	016 840 7878 9 FRONT PANEL (S)	29		LN121307P	001 032 8495 7 DIODE, GAASP
8		SGX7894	016 846 3777 9 SPACER	30		LN041395P	001 033 0045 6 DIODE, GAASP
9		SGX7895	016 846 3776 0 SPACER	31		SJF3057NK	003 410 8123 0 TERMINAL BOARD
10		SUS797	016 726 0677 3 SPRING	32	Δ	SJS9236	003 403 4660 7 AC SOCKET
11		SGXST25-KP	016 846 3480 3 ORNAMENT	34		SJT30540LX-V	003 410 5996 1 CONNECTOR
12		SGXST17-KM	016 846 3795 7 CASSETTE HOLDER	34		SJT30840LX-V	003 410 5998 9 LUG TERMINAL
12-1		QBP2006A	015 727 0706 8 SPRING	34		SJT31040LX-V	003 410 6112 1 LUG TERMINAL
13		SMN2001-1	016 632 1784 8 ANGLE	35		QJP1920TN-1	003 403 7219 8 CONNECTOR
14	⊗	SGX7899	016 846 3774 2 ORNAMENT	35		QJP1921TN-1	003 403 7220 5 CONNECTOR
14	⊕	SGX7899-1	016 846 3855 2 METER ORNAMENT	36		SMC1227	016 601 0543 0 SHIELD COVER
15	⊗	SBD144	016 700 1979 0 KNOB	37		SMN2043	016 632 1880 9 ANGLE
15	⊕	SBD144-1	016 700 2000 6 KNOB	38		SWKST11M1	016 934 0162 5 P/HEAD WIRE
16	⊗	SGX7898	016 846 3775 1 ORNAMENT	39		SWKST11M2	016 934 0161 6 R/P HEAD WIRE
16	⊕	SGX7898-1	016 846 3854 3 SLIDE GUIDE	40		SWKST11M3	016 934 0160 7 E/HEAD WIRE
17	⊗	SGX7897	016 846 3796 6 ORNAMENT	41		QJA0455ZC	003 400 5218 2 JACK
17	⊕	SGX7897-1	016 846 3853 4 ORNAMENT	SCREWS, WASHERS & NUTS			
18	⊕	SBC801A-1	016 702 6427 7 BUTTON	51		XTB3+8JFZ1	005 501 2523 0 SCREW
18	⊗	SBC866A	016 702 6649 5 BUTTON	52		XTB3+10J	005 501 2076 2 SCREW
19	⊕	SBC802A-1	016 702 6425 9 BUTTON	53		XTWS3+10Q	005 501 2293 5 SCREW
19	⊗	SBC867A	016 702 6650 2 BUTTON	54		XTB3+6F	005 501 2687 1 SCREW
20	⊕	SBC803A-1	016 702 6423 1 BUTTON	55		XTW3+12Q	005 501 1350 7 TAPPING SCREW
20	⊗	SBC868A	016 702 6651 1 BUTTON	56		XTB3+12JFZ	005 501 2078 0 TAPPING SCREW
21	⊕	SBC804A-1	016 702 6421 3 BUTTON	57		XTV26+6J	005 501 1301 6 SCREW
				58		XTB3+12J	005 501 1534 1 SCREW
				59		XTV26+8J	005 501 1140 5 SCREW
				60	⊕	SNE2125	005 500 5753 1 SCREW
				60	⊗	SNE2125-1	005 500 5752 2 SCREW
				61		XTB3+8JFZ	005 501 0138 3 SCREW

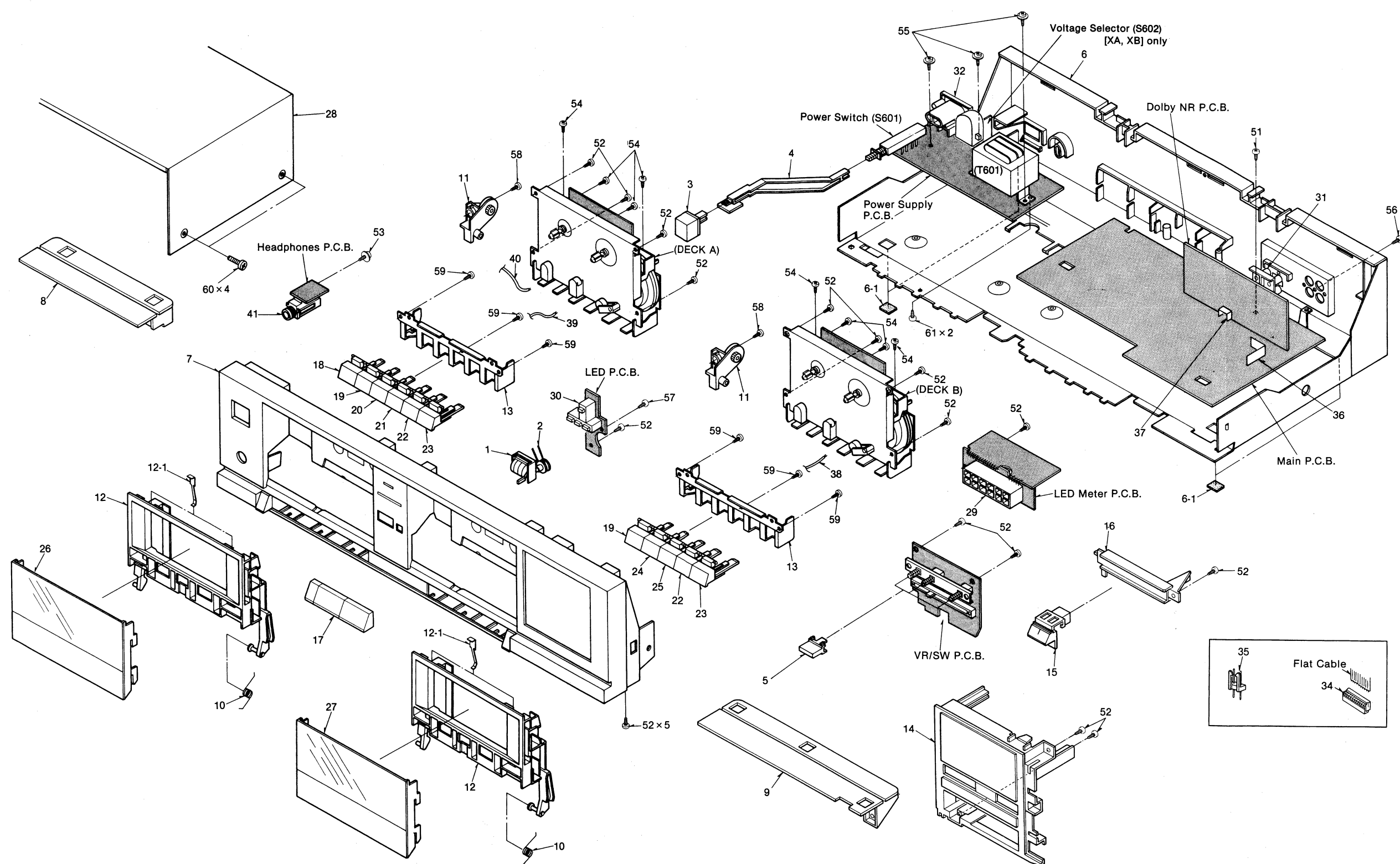
Ref. No.	Part No.	Part Code	Description	Ref. No.	Part No.	Part Code	Description
PACKINGS				A1	Δ	SJA183	003 490 4873 7 POWER CORD
P1	⊗	SPG5881	016 971 5052 1 PACKING CASE	XB		SJPK2202	003 492 6415 1 CORD
P1	⊕	SPG5882	016 971 5083 4 CARTON BOX	A3			
P2		SPS4963	016 977 3314 6 PAD	EK			
P3		SPS4964	016 977 3327 1 PAD	A3		SQF12910	016 983 5249 4 INSTRUCTION BOOK
P4		SPS4905	016 977 3274 7 PAD	E, EH		SQF12911	016 983 5250 1 INSTRUCTION BOOK
P5		XZB50X65B02	016 978 0420 2 PROTECTION COVER	A3		SQF12968	016 983 5254 7 INSTRUCTION BOOK
ACCESSORIES				A3			
A1	Δ	SFDAC05E03	003 490 4809 5 POWER CORD	XA, XL		SQF13047	INSTRUCTION BOOK
E, EG, EH, XA				A3			
A1	Δ	SFDAC05G02	003 490 2613 3 POWER CORD	XB			
EK				A4		SJP5213	003 492 0736 1 PLUG
A1	Δ	SJA163	003 490 2503 8 POWER CORD	XA, XB			
XL							

CABINET PARTS LOCATION



60	41	53	59	59	58	59	54	52	52	57	52	59	58	59	54
26		27	28	21	22	23		40	30	39	24	25	22	23	
8	12	12-1	7	10	17	18	19	20	12-1	12	11	1	13	2	10
														19	
														3	
														11	5
														9	13
														4	

CABINET PARTS LOCATION



60																														41			53										59			59			58		59			54		52		52			57		52		59		58			59		54		59			52		54										55			61			52			52			52			52			51			42			56		
26										27										28		21		22		23		40			30		39		24			25		22		23		38										32										29		37										35			31										34		36																								
8			12			12-1			7			10			17			18			19			20			12-1			12			11			1			13			2			10			19			3			11			5			9			13			4			6-1			14			15			6			16			6-1																															

Dolby NR-Equipped Stereo Cassette Deck

DEUTSCH

Verwenden Sie bitte diese Broschüre zusammen mit der Service-Anleitung für das Modell Nr. RS-T11.

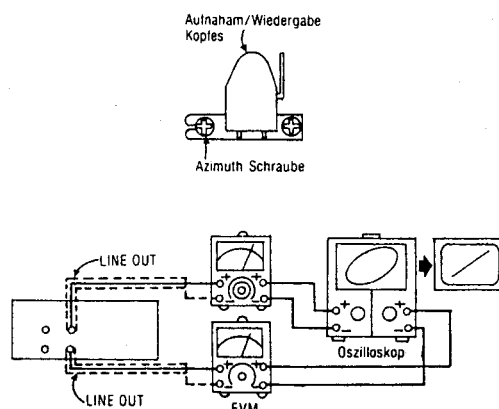
■ MESSUNGEN UND EINSTELL METHODEN

Meßinstrumente

- Elektronisches Voltmeter (EVM)
- Oszilloskop
- Digitaler Frequenzmesser
- Audiofrequenz-Oszillator
- Dämpfungswiderstand
- Gleichstrom-Voltmeter
- Widerstand (600Ω)

Kpofazimut-Justierung

1. Den Azimut-Justierungsteil (8kHz, -20dB) des Testbandes (QZZCFM) wiedergeben und die Winkeljustierungs-Einstellschraube so verstellen, daß der Ausgang vom linken und rechten Kanal maximal wird. (Wenn die Justierpositionen für den linken und rechten Kanal verschieden sind, ist eine Position zu finden, wo der Ausgang des linken und rechten Kanals ausgeglichen ist, und dann ist die Justierung durchzuführen.)
2. Gleichzeitig eine Lissajous-Wellenform ziehen und Phasenablenkung eliminieren.
3. Nach erfolgter Justierung sind die Bandführungs-Höhen- und Winkeljustierschrauben zu sichern.



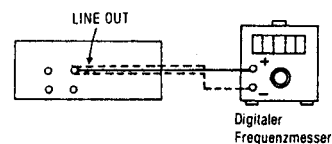
Bandgeschwindigkeits-Justierung

-- Schneller Bandlauf --

1. Stellen Sie den Bandgeschwindigkeitswählschalter auf "X2" und schließen Sie Deck A an TP1 und TPN1 und Deck B an TP2 und TPN2 kurz.
2. Spielen Sie den Mittelteil des Testbandes (QZZCWAT) ab.
3. Justieren Sie VR803 von Deck A so, daß die Abgabewerte innerhalb der Standardwerte liegen.

-- Normaler Bandlauf --

4. Stellen Sie den Bandgeschwindigkeitswählschalter auf "X1" und unterbrechen Sie Deck A in TP1 und TPN1 und Deck B in TP2 und TPN2.
5. Spielen Sie den Mittelteil des Testbandes (QZZCWAT) ab.
6. Justieren Sie VR802 von Deck B und VR801 von Deck A so, daß die Abgabewerte innerhalb der Standardwerte liegen.



Standardwert: 3000±15Hz(Normal),
6000±630Hz(Schnell)

Wiedergabe-Frequenzgang

1. Den Wiedergabe-Frequenzgangteil (315Hz, 12,5kHz~63Hz, -20dB) des Testbandes (QZZCFM) wiedergeben.
2. Überprüfen, ob der Frequenzgang innerhalb des in Abb. 1 für den linken und rechten Kanal gezeigten Bereichs liegt.

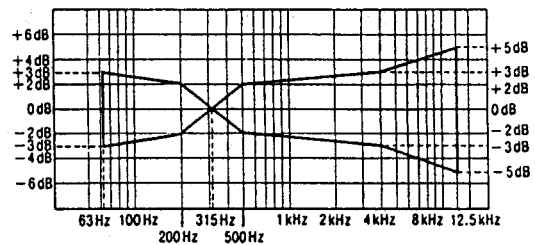
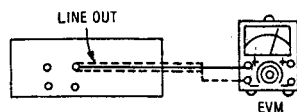
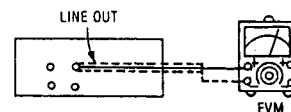


Abb. 1

Justierung des Wiedergabe-Verstärkungsgrades

1. Den für den Wiedergabe-Verstärkungsgrad justierten Teil (315Hz, 0dB) des Testbandes (QZZCFM) wiedergeben.
2. Den VR1 (linker Kanal) ((VR2 (rechter Kanal))) für Deck B und den VR3 (linker Kanal) ((VR4 (rechter Kanal))) für Deck A so justieren, daß die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert: $0,4 \pm 0,02V$



Gesamtfrequenzgang

1. Legen Sie eine normale Leerkassette (QZZCRA) ein und nehmen ein Signal (50Hz ~ 12,5kHz) von 20dB auf, das durch das Referenzeingabepegelsignal (1kHz, -24dB) gedämpft wird.
2. Das in Schritt 1 aufgezeichnete Signal wiedergeben und prüfen, ob der Pegel jeder Ausgangsfrequenz im Bereich liegt, der in Abb. 2 in Vergleich zur Referenzfrequenz (1kHz) gezeigt wird.
3. Falls er nicht im Standard-Bereich liegt, ist der Vormagnetisierungsstrom mit VR301 (linker Kanal) ((VR302 (rechter Kanal))) für Deck A so zu justieren, daß der Frequenzpegel innerhalb des standards zuliegen kommt.
4. Anschließend das auf der CrO₂-Leerband-Cassette (QZZCRX) und der Reineisenband-Leercassette (QZZCRZ) aufgezeichnete Signal auf 15kHz erhöhen und auf gleiche Weise justieren, Wie vorgehend beschrieben. Dann überprüfen, ob der Frequenzpegel innerhalb des in Abb. 3 gezeigten Bereichs liegt.

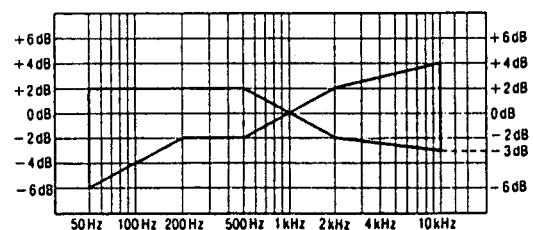
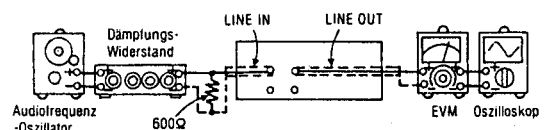


Abb. 2

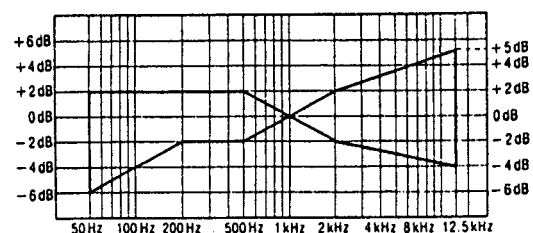
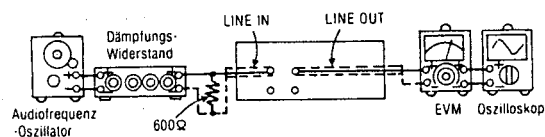


Abb. 3

Justierung des Gesamtverstärkungsgrades

1. Ein Normalband-Leercassette (QZZCRA) einsetzen und im Aufnahmepause-Zustand des Gerätes das Referenzsignal (1kHz, -24dB) eingeben.
2. Die Ausgangsleistung mit dem Dämpfungswiderstand auf 0.4V justieren und dann aufnehmen.
3. Das in Schritt 2 aufgezeichnete Signal wiedergeben und überprüfen, ob die Ausgangsleistung dem Standard-Wert entspricht.
4. Falls sie nicht dem Standard-Wert entspricht, ist der VR5 (linker Kanal) ((VR6 (rechter Kanal))) für Deck A zu justieren, und dann sind die Schritte (1), (2) und (3) zu Wiederholen, bis die Ausgangsleistung dem Standard-Wert entspricht.

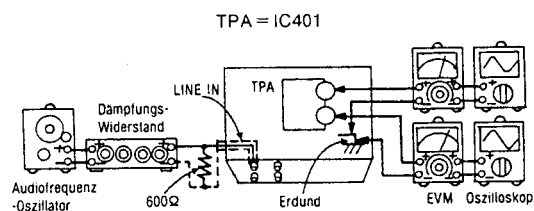
Standard-Wert: $0,4V \pm 0,5dB$ (0,02V)



Dolby-Rauschunterdrückungs-Schaltkreis

1. Eine Normalband-Cassette einsetzen und im Aufnahmepause-Zustand des Gerätes ein 5kHz-Signal eingeben.
2. Mit dem Dämpfungswiderstand so justieren, daß die Ausgangsleistung zwischen Anschluß 6 (linker Kanal) ((Anschluß 19 (rechter Kanal))) des IC401 und Masse 12,3mV beträgt.
3. Den Rauschunterdrückungs-Schalter (NR) einschalten und prüfen, ob der Pegel wie vorgeschrieben gegenüber dem Pegel im rauschunterdrückungsfreien Zustand verändert wird.

Standard-Wert: $8 \pm 1,5dB$



FRANÇAIS

Ceci est à utiliser conjointement avec manuel d'entretien du modèle No. RS-T11.

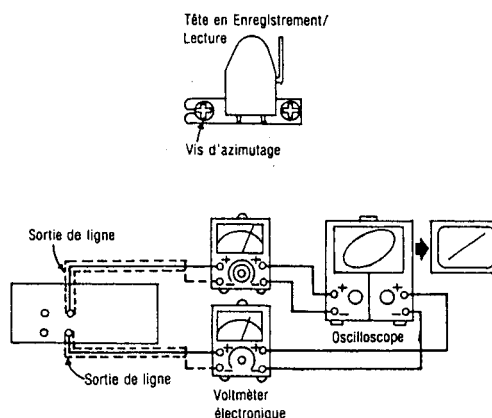
■ METHODES DES MEASURES ET REGLAGES

Appareils de mesure

- Voltmètre électronique
- Oscilloscope
- Compteur de fréquence numérique
- Oscillateur de fréquence audio
- A.T.T.(Atténuateur)
- Voltmètre à C.C.
- Résistance (600Ω)

Réglage de l'angle des têtes de lecture

1. Faire jouer la partie réglée azimutale (8kHz, -20dB) de la bande d'essai (QZZCFM) et régler la vis de mise au point azimutale de telle sorte que les puissances de sortie du canal de gauche et du canal de droite soient au maximum.
(Si les positions de réglage du canal de gauche et du canal de droite sont différentes, trouver une position où les puissances de sortie des canaux de gauche et de droite soient équilibrées, puis effectuer la mise au point.)
2. En même temps, établir une forme d'onde de Lissajous et éliminer la déviation de phase.
3. Après le réglage, bloquer les vis du réglage angulaire et de la hauteur des guides de bande.



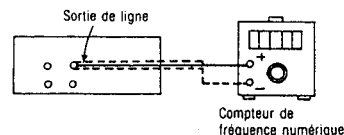
Réglage de la vitesse de défilement de la bande

-A grande vitesse-

1. Régler le commutateur de vitesse de défilement de la bande de montage sur "X2" et court-circuiter la platine A sur TP1 et TPN1, et la platine B sur TP2 et TPN2.
2. Faire jouer la partie centrale de la bande d'essai (QZZCWAT).
3. Ajuster la platine A sur VR803 de telle sorte que la puissance de sortie soit en deçà de la normale.

-Vitesse normale-

4. Régler le commutateur de vitesse de défilement de la bande de montage sur "X1" et mettre hors circuit la platine A sur TP1 et TPN1 et la platine B sur TP2 et TPN2.
5. Faire jouer la partie centrale de la bande d'essai (QZZCWAT).
6. Ajuster la platine B sur VR802 et la platine A sur VR801 de telle sorte que la puissance de sortie soit en deçà de la normale.



Valeur standard: 3000±15Hz(normale);
6000±630Hz(élevée)

Réponse en fréquence de la lecture

1. Faire jouer la partie de la réponse en fréquence de la lecture (315Hz, 12,5kHz~63Hz, -20dB) de la bande d'essai (QZZCFM).
2. Vérifier que la fréquence soit en deçà de la plage montrée à la Fig.1, à la fois pour le canal de gauche et le canal de droite.

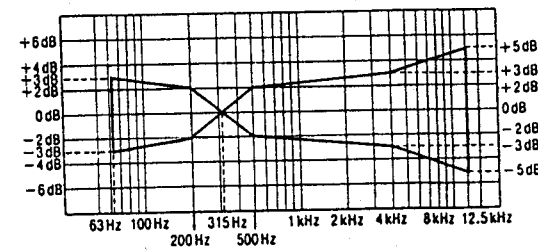
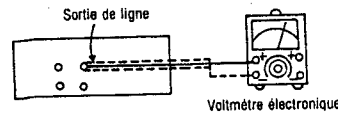
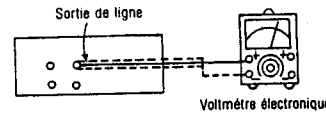


Fig. 1

Réglage d'amplification de la lecture

1. Faire jouer la partie réglée d'amplification de la lecture (315Hz, 0dB) de la bande d'essai (QZZCFM).
2. Régler la platine B: VR1 (canal de gauche) (VR2 (canal de droite)) et la platine A: VR3 (canal de gauche) (VR4 (canal de droite)) de telle sorte que la puissance de sortie soit en deçà de la normale.



Valeur normalisée: $0,4 \pm 0,02V$

Réponse en fréquence globale

1. Installer une bande Vierge normale (QZZCRA) et enregistrer en appliquant un signal (50Hz~12,5kHz), 20dB atténués à partir du signal du niveau d'entrée de référence (1kHz, -24dB).
2. Faire jouer le signal enregistré à l'étape 1 et vérifier que le niveau de chaque fréquence de sortie soit en deçà de la plage montrée à la Fig.2 en comparaison avec la fréquence de référence (1kHz).
3. S'il n'est pas en deçà de la plage standard, régler le courant de polarisation avec platine A: VR301 (canal de gauche) (VR302 (canal de gauche)) de telle sorte que le niveau de fréquence soit en deçà de la normale.
 - Niveau vers la haut dans la plage de fréquence élevéeAugmenter le courant de polarisation.
 - Niveau vers le bas dans la plage de fréquence élevéeDiminuer le courant de polarisation.
4. Après cela, amplifier le signal enregistré sur la bande vierge CrO₂ (QZZCRX) et la bande vierge métallisée (QZZCRZ) jusqu'à 15kHz et régler de la même manière que celle mentionnée ci-dessus. Puis, vérifier que le niveau de fréquence soit en deçà de la plage montrée à la Fig.3.

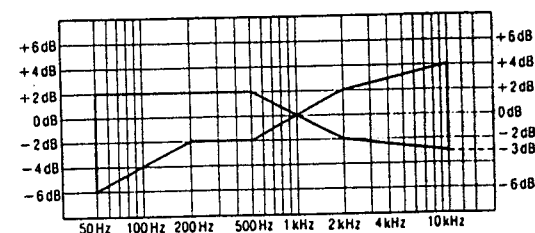
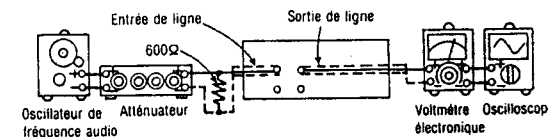


Fig. 2

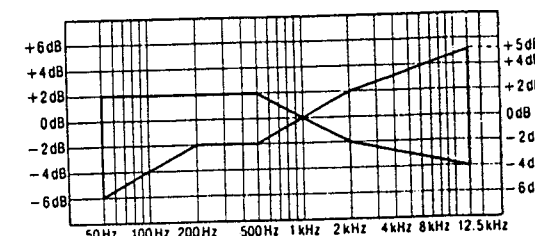
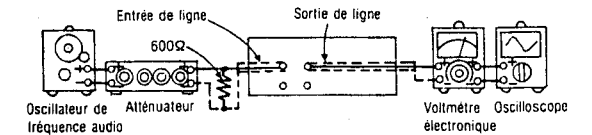


Fig. 3

Réglage d'amplification globale

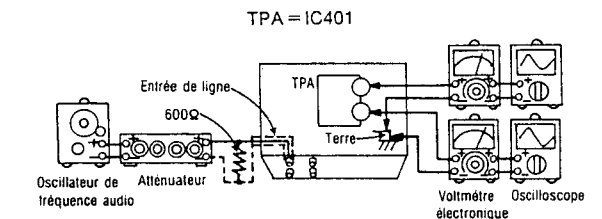
1. Installer une bande vierge normale (QZZCRA) et appliquer le signal de niveau d'entrée de référence (1kHz, -24dB) sur le mode d'intermission d'enregistrement.
2. Régler la puissance de sortie 0,4V avec l'atténuateur, puis enregistrer.
3. Faire jouer le signal enregistré à l'étape 2 et vérifier que la puissance de sortie soit en deçà de la normale.
4. Si elle n'est pas en deçà de la normale, régler platine A: VR5 (canal de gauche) (VR6 (canal de droite)) et répéter les étapes (1), (2) et (3) jusqu'à ce que la puissance de sortie soit en deçà de la normale.



Valeur normalisée: $0,4V \pm 0,5dB(0,02V)$

Circuit de réduction des bruits dolby

1. Installer une bande normale et appliquer un signal de 5kHz sur le mode d'intermission d'enregistrement.
2. Régler avec l'atténuateur de telle sorte que la puissance de sortie entre la borne 6 (canal de gauche) (borne 19 (canal de droite)) de IC401 et la masse soit de 12,3mV.
3. Mettre en marche le commutateur de réduction des bruits et vérifier que le niveau change tel qu'il est spécifié à partir du niveau d'entrée sur le mode de sortie de réduction des bruits.



Valeur normalisée: $8 \pm 1,5dB$

ESPAÑOL

Sírvase utilizarse junto con manual de servicio para el model No. RS-T11.

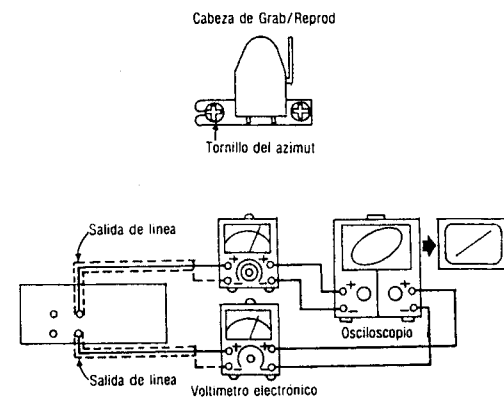
MÉTODOS DE AJUSTE Y MEDIDA

Instrumento de medición

- EVM (Voltímetro electrónico)
- Osciloscopio
- Frecuencímetro digital
- Oscilador AF
- ATT (Atenuador)
- Voltímetro CC
- Resistor (600Ω)

Ajuste acimutal de cabeza

1. Reproducir la parte ajustada de acimut (8kHz, -20dB) de la cinta de prueba (QZZCFM) y regular el tornillo de ajuste de ángulo de manera que las salidas de CH-I y CH-D sean maximizadas. (Cuando las posiciones de ajuste sean diferentes de CH-I y CH-D, encontrar una posición donde las salidas de CH-I y CH-D estén equilibradas y, luego, hacer el ajuste.)
2. Al mismo tiempo, trazar una forma de onda de Lissajous y eliminar la deflexión de fase.
3. Después del ajuste, fije los tornillos de ajuste de altura y ángulo de guía de cinta.



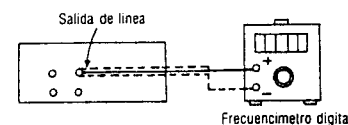
Ajuste de velocidad de cinta

-Alta velocidad-

1. Poner el conmutador de velocidad de cinta de compaginación "X2" conectar la Platina A: TP1 y TPN1, Platina B: TP2 y TPN2.
2. Reproducir la parte de en medio de la cinta de prueba (QZZCWAT).
3. Ajustar la Platina A: VR803 de manera que la salida esté dentro de la estándar.

-Velocidad normal-

4. Poner el conmutador de velocidad de cinta de compaginación en "X1" y abra la Platina A: TP1 y TPN1, Platina B: TP2 y TPN2.
5. Reproducir la parte de en medio de la cinta de prueba (QZZWAT).
6. Ajustar la Platina B: VR802 y Platina A: VR801 de manera que la salida esté dentro de la estándar.



Valor estándar: 3000±15Hz(normal) 6000±630Hz(alta)

Respuesta de frecuencia de reproducción

1. Reproducir la parte de respuesta de frecuencia de reproducción (315Hz, 12.5kHz~63Hz, -20dB) de la cinta de prueba (QZZCFM).
2. Comprobar que la frecuencia esté dentro de la gama mostrada en la Fig.1 tanto para CH-I como para CH-D.

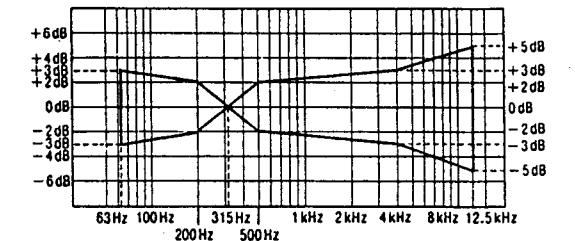
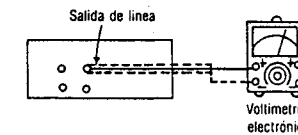
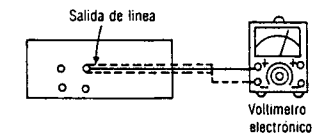


Fig. 1

Ajuste de ganancia de reproducción

1. Reproducir la parte ajustada de la ganancia de reproducción (315Hz, 0dB) de la cinta de prueba (QZZCFM).
2. Ajustar la Platina B: RV1(CH-I) (RV2(CH-D)) y la Platina A: RV3(CH-I) (RV4(CH-D)) de manera que la salida esté dentro de la estándar.



Valor estándar: 0,4±0,02V

Respuesta de frecuencia total

1. Poner una cinta virgen normal (QZZCRA) y grabar aplicando señal (50Hz~12.5kHz), 20dB atenuados de la señal de nivel de entrada de referencia (1kHz, -24dB).
2. Reproducir la señal grabada en el paso 1 y comprobar que el nivel de cada frecuencia de salida esté dentro de la gama mostrada en la Fig.2 en comparación con la frecuencia de referencia (1kHz).
3. Si no está dentro de la gama estándar, ajustar la corriente de polarización mediante la Platina A: RV301(CH-I) (RV302(CH-D)) de manera que el nivel de frecuencia esté dentro del estándar.
 - Subir el nivel en la gama de alta frecuencia Incrementar la corriente de polarización.
 - Bajar el nivel en la gama de alta frecuencia Disminuir la corriente de polarización.
4. Después de eso, incrementar la señal grabada en la cinta virgen CrO₂ (QZZCRX) y la cinta virgen metálica (QZZCRZ) hasta 15kHz y ajustar de la misma manera como mencionado arriba y comprobar que el nivel de frecuencia esté dentro de la gama mostrada en la Fig.3.

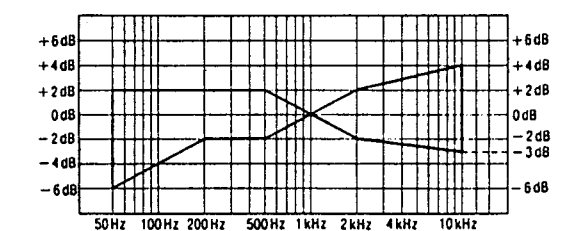
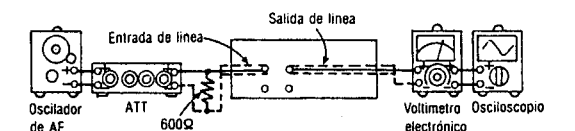


Fig. 2

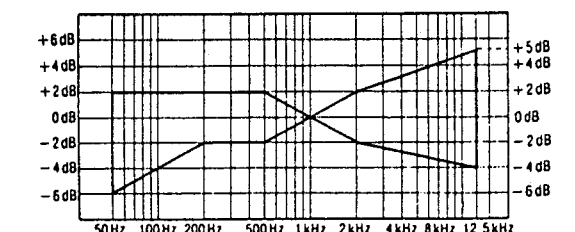
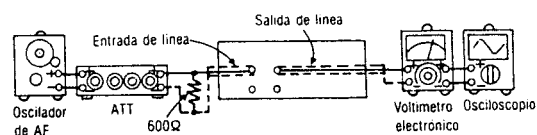


Fig. 3

Ajuste de ganancia total

1. Colocar una cinta virgen normal (QZZCRA) y aplicar la señal de nivel de entrada de referencia (1kHz, -24dB) en la modalidad de pausa de grabación.
2. Ajustar la salida 0,4V mediante atenuador y luego, grabar.
3. Reproducir la señal grabada en el paso 2 y comprobar que la salida esté dentro de la estándar.
4. Si no está dentro de la estándar, ajustar la Platina A: RV5 (CH-I) ((RV6 (CH-D))) y repetir el paso (1), (2) y (3) hasta que la salida esté dentro de la estándar.

Valor estándar: $0,4V \pm 0,5dB (0,02V)$



Circuito RR Dolby

1. Colocar una cinta normal y aplicar señal 5kHz en la modalidad de pausa de grabación. pausa de grabación.
2. Ajustar mediante atenuador de manera que la salida entre terminal 6 (CH-I) ((terminal 19 (CH-D))) de IC401 y tierra sea 12,3mV.
3. Prender el interruptor RR y comprobar que el nivel cambia como especificado por el nivel en la modalidad de salida RR.

Valor estándar: $8 \pm 1,5dB$

